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PILCHER ANNIVERSARY CLINICS AND REPORTS.

PAIN DUE TO ANATOMICAL DEVIATION OF THE URETER.

Paul Pilcher, A.M., M.D.

Brooklyn-New York.

TO determine the cause of pain referred to the abdomen or to the back is often a difficult problem. When the pain comes on unexpectedly in the night without a previous history of some definite disorder, we think of many lesions which might give rise to it. The occurrence of nausea, vomiting and frequency of urination is so common an accompaniment of most attacks of colicky pain that they often simply tend to confuse the picture.

In our search for evidence we palpate the abdomen; we examine the urine and blood; we take the temperature; we examine the pelvis; we take radiographs, and when all is done we may be still in doubt. However, there are still more delicate tests which may be employed. They consist of a combination of special methods and instruments. I refer to the stomach tube, the Bismuth meal, the Bismuth enema and the x-ray in stomach and intestinal lesions; the blood test for cholesterol, urinary analysis, and the x-ray for gall stones; and the cystoscope, the ureter catheter, the x-ray and pyelography in obscure lesions of the kidney, kidney pelvis and ureter. Add to these a mind trained to interpret these combined findings and a correct diagnosis is the result, where formerly an exploratory operation was resorted to, and only too often failed to reveal the lesion.

During the past year several cases have been referred to our clinic complaining of recurring pain in the hypochondrium and lumbar region, often extending downward to the lower right or left abdominal region. Those patients in whom pus or macroscopic blood, or tubercle bacilli have been found in the urine coming from the ureter of the affected side, have been relatively easy of diagnosis, especially when a radiograph has shown the presence of a calculus at the pelvo-ureter junction, or in the ureter.

In most of the remaining cases, gall bladder disease, ulcers of the stomach and intestines—aneurysms—spinal disease—and tubo ovarian and uterine lesions can be excluded as the cause of the pain.

There remain chiefly the chronic lesions arising from the appendix and a condition frequently mistaken for appendicitis, namely intermittent dilatation of the renal pelvis due to anatomical deviation of the ureter, and a small class of cases due to stricture of the ureter and perinephritis. The acute inflammatory lesions are not easily confused with any of these disorders.

The cases of anatomical deviation of the ureter include chiefly those due to high implantation of the ureter into the renal pelvis, twists and kinks of the ureter due to undue mobility of the kidney and the first portion of the ureter, and the very important class of cases in which a set of aberrant blood vessels cross the ureter and enter the lower pole of the kidney and form a loop over which the ureter bends and becomes obstructed.

The diagnosis of such a condition can be made before operation with considerable exactness; but oftentimes it involves an extended study of the case, and even when it is suspected after taking the history, examination may lead to the discovery of other lesions as a cause of the pain.

The possibilities of diagnosis and the means employed to establish the same are well shown in the following case reports:

ILLUSTRATIVE CASES.

CASE I. Clinic No. 1,976. Referred by Dr. H. M. Lowenthal. *Diagnosis:* Intermittent hydro-pelvo-nephrosis; obstruction of ureter due to aberrant blood vessels with kink and twist of ureter.

Chief Symptoms: Recurrent pain in right hypochondrium and the right lower quadrant of the abdomen.

Patient is a young nervous girl, aged 23, who seven years ago began to have pain in the right side coming on in the evening and lasting for about two hours. If she worked too hard, or was very nervous, pain would appear in the right hypochondrium. It would come on sharply and would disappear suddenly. Latterly the pain has been more severe and she has needed some morphine to control it. There has been no disturbance of any of the essential systems of the body. Her nutrition is good and the bowels are regular. There are no symptoms referable to the stomach or lungs. No bladder symptoms. Pain always starts in the same spots in the right hypochondrium with severe colic-like pain which passes through to the back, very similar to that observed in gall stone colic. After the severity of the pain has passed, the soreness remains and feels like a sore tooth. Pain is more apt to come on when she is tired, but does not seem to have direct connection with exercise, and no connection with eating, gas formation in the bowels, or her menstrual periods. After awhile the pain goes away and she passes an increased amount of water, or at least she goes more frequently to pass her water.

Lately the pain has been more severe. She has an attack every two or three weeks. Two weeks ago had an attack which lasted all day and into the next day. At first there is a gnawing feeling in the right side and sense of pressure, then doubles up with severe colic, and now there is a continual sense of distress in that side.

The condition has repeatedly been diagnosed as appendicitis and she has four times been advised to have her appendix removed and the operation has been refused.

Physical examination showed no abnormalities with the exception that the right upper quadrant of the abdomen examined during the time the patient was having pain, showed the presence of a fairly large mass in the region of the kidney and gall bladder presenting beneath the free border of the ribs. There is some tenderness over the cecum.

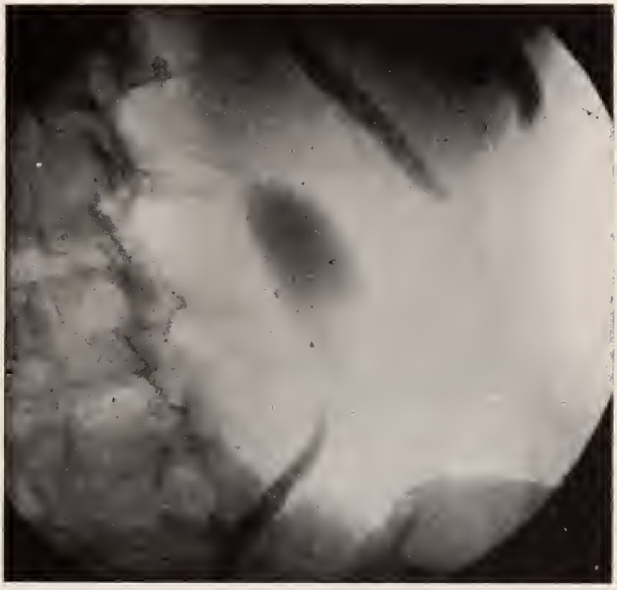

Fig 1. Uretero-pyelogram in Case 1. Showing deformity of ureter and "egg shaped" dilatation of renal pelvis. Pilcher Clinic.

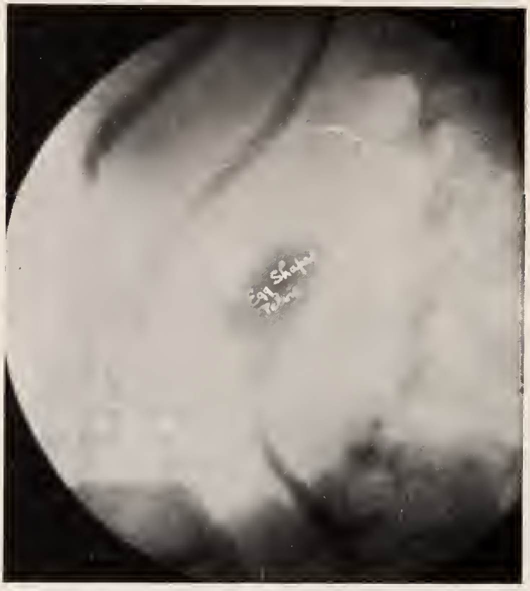

FIG. 2. Outlines of kidney and ureter in Case 1. Note oblique axis of kidney. Uretero-pyelogram.

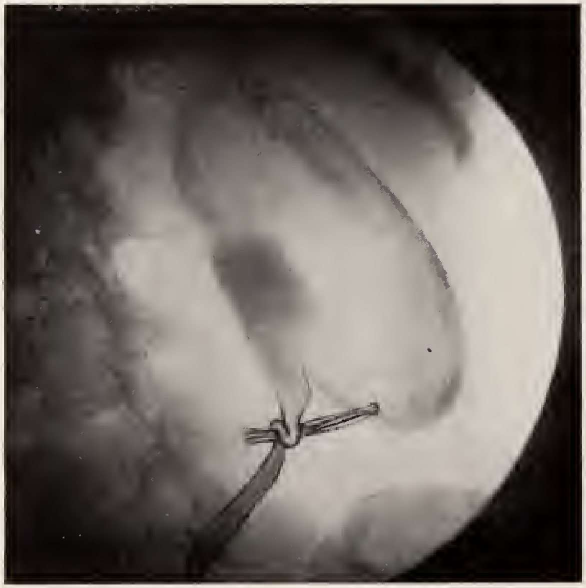

FIG. 3. Artist's interpretation of the pyelograph in Case 1. Pilcher Clinic.

Examination of the urine—acid, 1020, no albumin, no sugar and no abnormal microscopical findings.

From the history of the case, the age of the patient, the peculiar character of the attacks, the long duration of the attacks, the absence of urinary findings, the absence of any gastro-intestinal disturbance, such as excessive fermentation, constipation and indigestion of various types, the most probable diagnosis in this case is an intermittent hydro pelvo renalis, due to anatomical deviation of the ureter caused either by an aberrant blood vessel or a fixed portion of the ureter kinked by prolapse of the kidney. In a case of this kind we can exclude chronic appendicitis and prolapsed or enlarged twisted cecum, on account of a definite lack of intestinal symptoms. Stone in the kidney is also possible, but may be excluded by x-ray examination. But a stone present in the pelvis or right ureter for a period of seven years would give absolute changes in the urine, which we did not find in this case.

The indications for the examination are—first, an x-ray of the kidney and second, a pyelograph of the pelvis of the kidney.

Further examination was made on October 21, 1915.

Radiograph taken by Dr. James Pilcher showed right kidney to be normal in size, but its axis was oblique. There was no stone present in the kidney, or its pelvis, or its ureter.

Argentide picture of the right ureter and kidney showed the right ureter to be normal in size until it reached a point opposite the transverse process of the first lumbar vertebra, where it is constricted and twisted about. The argentide, however, passes by the obstruction and dilates the kidney so that the picture is that of a typical egg-shaped pelvis which is pathognomonic of an intermittent hydro-pelvo-renalis, due to constriction or aberrant blood vessels. (Figs. 1, 2, 3.)

In examining the pyelographs it will be seen that none of the calyces are visible and this is so because the relaxed walls of the hydronephrotic sac are not distended to their full capacity. The kidney itself lies between the free border of the ribs and the crest of the ilium.

Cystoscopic examination revealed the fact that the left kidney was present and secreting normal urine.

Operation, exposing right kidney (Fig. 4). It was found prolapsed and in an oblique position with a dilated pelvis. A set of aberrant vessels was found crossing the ureter, as indicated in the radiogram, consisting of a fairly large artery and two veins, as in the accompanying drawings. The artery was ligated and divided and in addition was dissected away from the ureter. (Fig. 5) It was found that there was some constriction of the ureter beneath this attached vessel. The pelvis which was greatly dilated was separated, a large probe passed down through the ureter dilating it. (Fig. 6) A plastic operation on the pelvis of kidney was done; the kidney fixed in normal position and the wound sutured.

Patient made an uneventful recovery and has never had any recurrence of symptoms since that time.

CASE II. Male. Referred by Dr. Warren L. Duffield. *Diagnosis:* Intermittent hydro-pelvo-nephrosis; obstruction of ureter due to aberrant blood vessels causing kinking of ureter.

Abstract of History: Patient nineteen years of age. Six years ago began to have attacks of pain in region of right kidney, not very severe, radiating to testicle and bladder. Lasting about two days. Attack comes on gradually, becomes more severe, dull ache and then disappears. These spells come on at least every two weeks, and are described as attacks of severe cramplike pain in the right side beneath the free border of the ribs, frequently brought on by violent exercise, riding on trains, etc. Generally comes on in the middle of the night.

His urine has been examined by several physicians who stated that he had pyelitis. Aside from the pain there have been no symptoms of renal disease. Bowels regular; no indigestion; sleeps well, but nervous. This is practically all of his history.

In other words, he has recurrent attacks of pain in the right hypochondrium referred to the right lumbar region, extending down toward the bladder. The region of the kidney is tender during these attacks. The patient is becoming more and more limited in his activities.

Urine Acid; 1018; trace of albumin; small amount of blood; many large round epithelial cells and crystals.

Cystoscopy: Urine collected from right kidney showed many blood cells, probably traumatic; large number of granular and renal epithelia.

X-ray of kidney negative.

Argument: By exclusion, all of the more common lesions were eliminated. Our only positive signs were the few blood cells in the urine and pain in the region of the right kidney, for the x-ray picture was negative. Therefore, a pyelograph of the right kidney and ureter was taken and showed that the right ureter was very markedly kinked, forming a hairpin curve opposite the pelvis of the kidney, and that it entered the pelvis of the kidney abruptly. A second picture showed an egg-shaped dilatation of the pelvis of the kidney (Fig. 7). On this evidence a diagnosis was made of intermittent dilatation of the renal pelvis due to obstruction of the ureter caused by aberrant renal blood vessels.

Operation was advised and undertaken by Dr. Duffield. The exact anatomical conditions as outlined in the argument were found by him at operation. The blood vessels were divided and the ureter which had been very markedly kinked immediately straightened out. The kidney was fixed in a high position and the patient made a good recovery.

Case III. Male. Referred by Dr. Arthur H. Bogart. *Diagnosis:* Intermittent hydro-pelvo-renalis due to anatomical deviation of the ureter.

Patient twenty-two years of age. Main points in history were that the patient had suffered from attacks of pain referred to the right side of the abdomen mostly in the lumbar region. *First attack* came on suddenly in the middle of the night, in February, 1914, very severe and suggestive of renal origin. There was frequency of urination. *Second attack* ten months later came on during the day. Pain started in the back and radiated to the front. At first the pain was severe, then moderated. There was increasing frequency of urination. *X-ray examination negative.* Several attacks followed. Was in hospital for three weeks under observation, as the result of which he was operated upon for possible appendicitis, and a kinked, diseased appendix was removed. However, attacks recurred immediately. Further x-rays, wax tipped catheters and many examinations at another clinic failed to reveal the cause of his symptoms. A study, however, of the

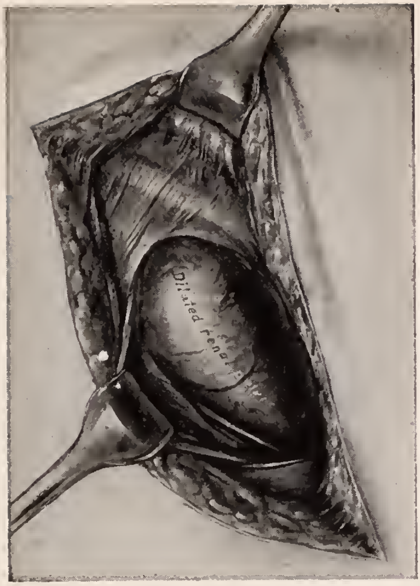

Fig. 4. Dilated renal pelvis due to anatomical deviation of ureter (aberrant blood vessel). Incision exposing kidney showing dilated pelvis presenting in wound. Case 1.

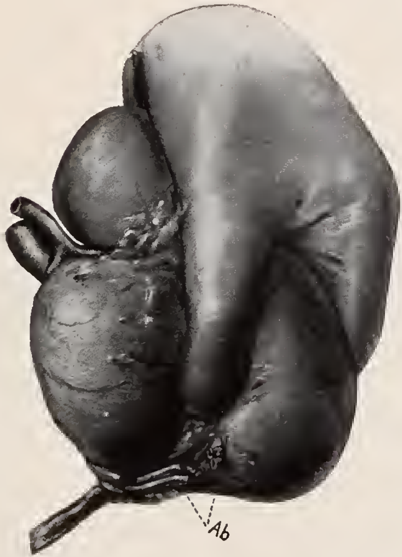

Fig. 5. Dilated renal pelvis showing aberrant blood vessels crossing ureter causing constriction. Showing position of hand grasping kidney to accentuate deformity. Aberrant vessels (Ab) have already been cut—consisting of an artery and two veins entering lower pole of kidney. Case 1.

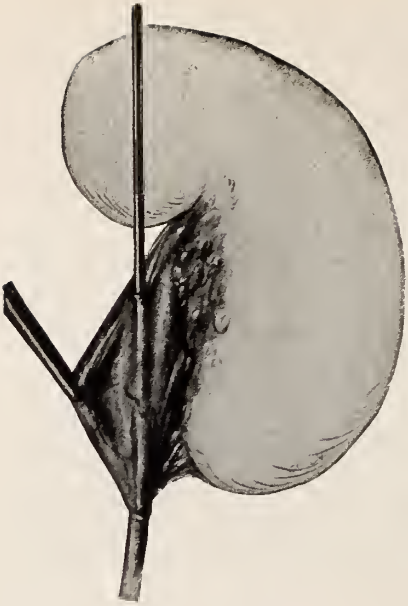

FIG. 6. Dilated renal pelvis due to anatomical deviation of ureter. Later step in operation after blood vessels have been divided and dissected free from ureter. In cases of long standing a permanent impression has been made upon the ureter with thickening. The probe should be passed from above downward beyond point of obstruction and a suitable size soft bougie passed from above into the bladder.

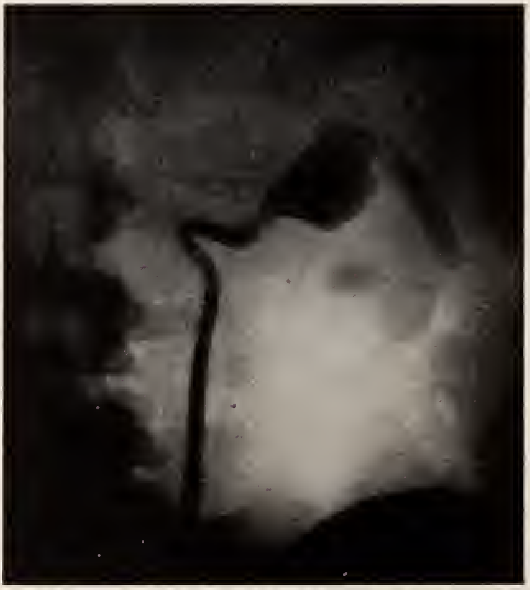

FIG. 7. Pyelograph of the ureter and renal pelvis in Case 2.

x-ray plates demonstrated that the kidney occupied an oblique position; that its axis was not perpendicular which it should be in the normal state; also that the kidney descended through an arc of fully two inches and that the hepatic flexure of the colon was prolapsed. Further, that there occurred regularly a spasm at the hepatic flexure (Fig. 8), which would account for pain in the region of the cecum.

A pyelogram of the right kidney (Fig. 9), was taken under anesthesia and it revealed an irregular dilatation of the pelvis of the right kidney with the calyces of the kidney moderately dilated. A *positive diagnosis of intermittent dilatation of the pelvis of the kidney with anatomical deviation of the ureter* was made. Previous to this time pain had centered more over the region of the appendix and low down in the pelvis.

Argument: The symptoms in this case were very severe first, pain in the region of the kidney, later most marked over the cecum; some frequency of urination during attacks; a few blood cells in the urine; some rigidity of the right rectus muscle during these attacks.

At the suggestion of the writer the patient was operated upon by Dr. Bogart. A moderate dilatation of the pelvis of the kidney was found. The kidney was sutured in a high position. No aberrant blood vessel demonstrated. Patient made a good recovery and has been well since that time.

Case IV. Female. Referred by Dr. Walter D. Ludlum.

Diagnosis: Intermittent dilatation of pelvis of kidney due to kinking of ureter in a case of ren mobilis. Partial volvulus of ascending colon.

Some cases are complicated by intestinal lesions. It is very important to search these out in order to do complete surgery when anything is attempted. This patient complained of pain in the right hypochondrium and the right lumber region, quite typical of renal disturbance. These attacks were severe and recurrent, passing down to the region of the cecum. The attacks of pain in the right side came on at intervals of months, but there were no evidences of disease demonstrable in the urine. In addition, she gave a very distinct history of indigestion supposed to be due to gastric ulcer; was persistently constipated.

Radiogram showed the presence of a rudimentary rib, a prolapse of the hepatic flexure and prolapse of the right kidney.

A *pyelogram* showed a very slight dilatation of the pelvis of the right kidney, but no change in the calyces of the kidney. Negative for stone.

Cystoscopic examination showed an accumulation of urine in the pelvis of the right kidney.

Argument: A case with such a history demands more than a diagnosis of intermittent dilatation of the renal pelvis, and further examination revealed a prolapsed dilated cecum.

Operation was undertaken. The kidney was found to be prolapsed and freely movable. It was raised up and fixed in good position. Then the abdomen was opened through a right rectus incision. A prolapsed and partially rotated cecum was found together with a markedly dilated caput with a long appendix. A plastic operation was done on the cecum, and the ascending colon was brought up into its normal position and sutured there. As a result, the patient made a good recovery and was relieved of her lumbar and lower abdominal pain.

There are now no symptoms of her original indigestion and her bowels move regularly without cathartics.

CASE V. *Patient presenting symptoms similar to those found in cases of intermittent dilatation of the renal pelvis due to anatomical deviation of the ureter, but really due to conditions of the colon and pelvic organs.* A woman, twenty-four years of age, whose chief symptom had been persistent pain in the left hypochondrium passing around to the back and down toward the bladder. She stated that the pain came on suddenly and was described as a general abdominal pain which later resolved itself into a colicky pain referred to the left hypochondrium and left lumbar region. She usually vomited with these attacks and demanded morphin to control the pain. The attacks recurred with increasing frequency. Was sent to another clinic and remained there for two months without diagnosis and returned home still suffering from the pain. The chief features of her illness while in the hospital were vomiting and pain.

The diagnosis first suggested by the symptom complex was an obstruction of the ureter with pain originating in the kidney.

Urinalysis showed an acid reaction, sp. gr. 1.020, trace of albumin, no sediment.

Radiographs of the kidney were negative.

Vaginal examination showed tenderness in the left fornix. Traction on the cervix caused pain referred to left hypochondrium.

Radiographs of the colon demonstrated a deformity of the cecum and transverse colon, confining a fecal mass in the cecum; also showing the presence of adhesive bands binding together a portion of the transverse colon and ascending colon.

A *pyelogram* of the left kidney and ureter was taken and no abnormality was found. (Fig. 11.)

Evidently the kidney must be excluded as the cause of the pain.

With the definite lesions known to exist in the first portions of the large intestine, the patient was again questioned as to her early history, and it developed that at first she had suffered entirely from pain on the right side. This pain had come on suddenly, was accompanied by vomiting and fever and was very suggestive of acute appendicitis. The left sided pain evidently originated in the left tube and ovary.

The abdomen was opened and a chronically deformed appendix was removed. The ascending and transverse colon were freed from the adhesions which bound them together. A plastic operation was performed on the left uterine adnexa and some adhesions extending to the sigmoid colon were divided.

The patient made a good recovery and has been entirely relieved of her symptoms.

In concluding this brief clinical report the writer wishes to emphasize the fact that the diagnosis of pain due to anatomical deviation of the ureter can rarely be made from a consideration of the clinical symptoms alone, or by the aid of examinations made in the laboratory. One must depend more upon the various mechanical aids, such as the pyelograph and the cystoscope, basing our final judgment, however, on the combined evidence collected from interrogation of the patient, a personal examination of the patient, the laboratory reports, and the interpretation of the scientific aids to our special senses, the cystoscope and the x-ray.

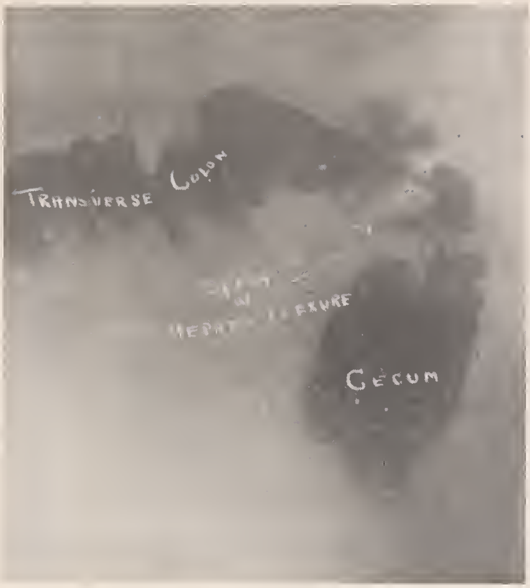

FIG. 8. Radiogram of cecum and hepatic flexure in Case 3. Showing spasm of section of gut at flexure. Appearing on several plates.

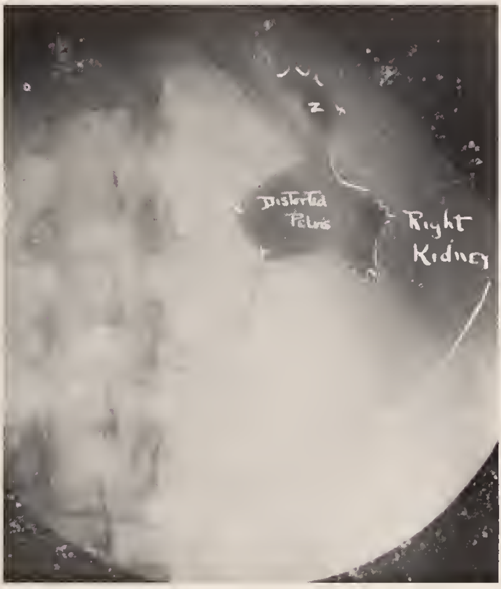

FIG. 9. Outlined pyelogram of kidney in Case 3. Pilcher Clinic.

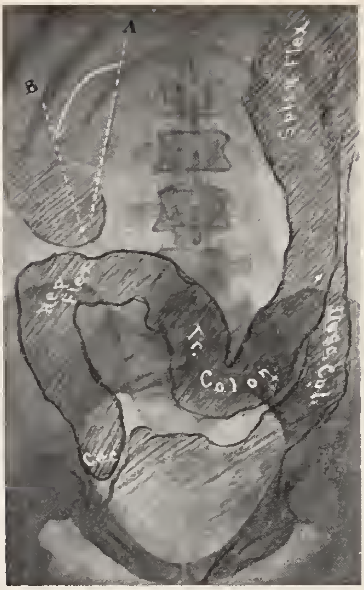

FIG. 10. (2096) Reproduction of x-ray taken in Case 3 at Dr. Eastmond's Clinic showing prolapse of hepatic flexure, prolapse of right kidney and change in the kidney axis. Dotted line A is the normal axis of the kidney. Dotted line B is the axis of the kidney shown in the x-ray.

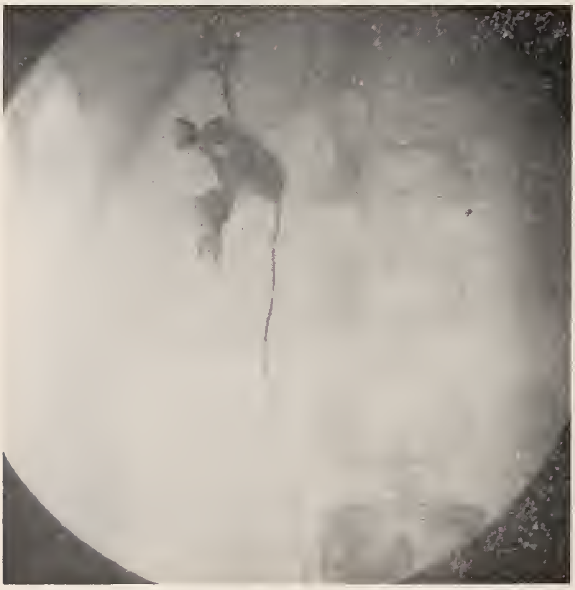

FIG. 11. Pyelogram in Case 5. Showing normal ureter and kidney pelvis.

HEMATEMESIS AND ITS TREATMENT.*

Frank Bethel Cross, M.D.

Brooklyn-New York.

OF varied causation, blood cast out of the stomach may appear as a bright red fluid, or a reddish fluid containing brownish and reddish clots, or a brownish fluid containing brownish granular material resembling coffee-grounds, or as flecks of red clots in an otherwise uninteresting vomitus. The determining factor in this varying appearance is the length of stay of the blood in the stomach with its exposure to the influence of the gastric enzyme, to a less degree the amount of blood influencing its ultimate aspect.

The hemorrhage may be small in quantity and come from nothing but a congested stomach which has been outraged by continued vomiting or retching. How often patients remark that they vomited until they brought up blood-streaked mucus or a small amount of "pure blood"! Or the hemorrhage may arise from ulcer (gastric or duodenal), in which case it is in considerable amount. Twenty-five per cent of these ulcer cases bleed. In neoplasm of the esophagus or stomach, with ulcerating surface, there is rarely a large hemorrhage, but rather the coffee-ground material afore mentioned. We may look expectantly for this symptom in 60 per cent of these cases of new growth. Rupture of aneurism either into the stomach or esophagus is usually attended with vomiting of large amounts of blood, although in the only case of this description I have personally attended, the amount raised was trifling, while at autopsy the stomach was found full of blood.

As a result of the portal obstruction in hepatic cirrhosis, there is frequently vomiting of large amounts of blood, which comes from the engorged veins of either the stomach or the esophagus. These hemorrhages have been the largest I have ever seen. With mitral stenosis there may be hemorrhages traceable to the congestion of the gastric mucosa, and with the enlargements of the spleen hematemesis may also occur.

Owing to chemical changes in the character of the blood, hemorrhages from the stomach may be observed in primary anemias, purpura, scurvy, hemophilia, and chronic nephritis. Vomiting of blood is occasionally seen in the little-understood vicarious menstruation. In small amounts blood may appear in the vomitus after the ingestion of corrosive poisons, or in the vomitus of acute bacillary gastritis. Less frequently it is observed in the severest forms of acute infectious diseases.

The treatment of hematemesis is the treatment of hemorrhage from an open bloodvessel upon which no mechanical or surgical pressure can be made. In consequence the treatment is largely one of reliance upon the phenomenon of natural blood clotting, as influenced by factors which may contribute to this desideratum.

First, there is the need of the most absolute physical and physiologic rest and quiet — accomplished by rest in bed and the free exhibition of morphin hypodermically, and the avoidance of any and all feeding. When a feeding schedule is resumed, it must be characterized by the utmost conservatism for several days.

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* Read before the Brooklyn Society of Internal Medicine, Feb. 25, 1916.

What shall be said of the oral administration of medicaments? Such a drug to be of value must do one of two things: either act locally on the muscular coat of the bleeding bloodvessel, or assist directly in the formation of a clot. If the hemorrhage is small, ten to twenty drop doses of the usual stock 1/10% sol. of adrenalin chlorid is worthy of trial. The adrenalin must come directly in contact with the damaged bloodvessel and exert hemostasis before its chemical composition can be altered by the gastric ferment, as its action is due to local effect on the muscle of the vessel walls, or possibly the nerve terminations contained therein. If the gastric enzyme has been fixed by the blood present in the stomach or the stomach comparatively empty as the result of recent vomiting, we can hope for local absorption of the adrenalin before it can be chemically changed. Granted that contact of adrenalin solution and ruptured bloodvessel is effected, we may look for physiologic action of the adrenalin lasting from one-half to two hours.

Ewald's suggestion of gastric lavage with ice water is interesting: it is at least rational, tending to cleanse the stomach and to stimulate the wall of the damaged bloodvessel to contraction by the application of cold. A brave man would therefore have logic sustaining courage, if he used it.

What remedies have been suggested as of value in assisting the formation of a clot at the bleeding point? Calcium salts, through contributing to the formation of fibrin ferment, are in this group. But, given per orem they are irritant and frequently provoke vomiting: given per rectum they are rarely retained long enough to be absorbed. Consequently they are not of much help in an hour of trouble. Large bulky doses of insoluble bismuth salts probably act mechanically. Ten grain capsules of gallic acid may be well borne.

It will be interesting to note what value will be ultimately assigned the thromboplastin suggested by Hess (Jour. A. M. A., April 24, 1915) and tried out so successfully in the throat operations of the Children's Clinics of the New York Department of Health as reported recently by Cronin (Jour. A. M. A., Feb. 19, 1916). Hess has proposed the use of its solutions intravenously in acute internal hemorrhages.

There are a number of substances which must be considered because of their tendency to limit the hemorrhage by facilitating the formation of a blood clot when given subcutaneously. I refer to the group of biologic products of which horse serum is the type. This particular serum is very valuable in doses of 20 c.c. When repeated the possibility of anaphylactic phenomena supervening must be borne in mind. Coagulose, a sterile soluble powder containing fibrin ferment from the horse, is on the market commercially. Dissolved in water at 98° and injected subcutaneously in doses of one ampoule of the original preparation in 15 c.c. or ½ oz. of water, a second dose can be given in one or two hours, and in persistent hematemesis a daily schedule of three or four doses can be followed for several days. Its use is very advantageous, and there is this to especially commend it — that it is readily obtainable in an emergency.

Human serum or fresh human blood may be used subcutaneously without the fear of anaphylaxis, but the serum is ordinarily not at hand, save in large hospitals, and one must bear in mind in the contemplated use of fresh human blood the everpresent danger of lues.

When the hemorrhage is large or profuse, the effect of the withdrawal of such an amount of blood is to precipitate the patient into shock, with pallor of the skin and mucous membranes, cold, sweaty extremities, small, rapid, feeble pulse, and dyspnea. The indication for a supportive dose of morphin is plain and the question of saline hypodermoclysis must be considered. There are those who raise a doubt as to its advisability, but the consensus of opinion is that it has a real value, the same value that it has in other conditions of post-hemorrhagic shock. Its slow absorption, comparatively speaking, makes for restoration of blood volume without the rapid increase of blood pressure that would favor continuance or augmentation of the hemorrhage. The Murphy drip of normal saline is of unquestioned utility, if the rate of dropping is not so great as to induce expulsion of the total amount of fluid given. This admittedly is largely a matter under nursing control. Direct transfusion of blood in this day of the simplification and perfection of the technique of this surgical measure, would be of value in desperate cases, adding a factor in blood clotting that the subcutoneous injection of saline does not present.

To recapitulate then, the treatment of gastric hemorrhage is rest in bed with physiologic rest of the stomach, morphin hypodermically, adrenalin by mouth, the subcutaneous use of a blood coagulating element, and treatment of incidental shock with fluids given carefully per rectum or subcutaneously. Individualization in treatment is essential.

In this none-too-satisfactory treatment, we may console ourselves with the fact that the immediate mortality of hematemesis is 5 per cent or less.

HEMOPTYSIS.

Joseph W. Goldsmith, M.D.

New York City.

Definition.—Hemoptysis is defined as an expectoration of blood, pure or unmixed, usually of a bright red color, following the act of coughing. Its source may be the bronchial mucosa, and less frequently it comes from eroded vessels in lung cavities or their walls; rarely from the larynx, trachea, and larger bronchi. The source of the hemorrhage, however, is not always easily demonstrable, even when it has resulted fatally and the lungs are minutely examined.

Etiology.—Pulmonary congestion from whatever source may result in hemoptysis, although the amount of blood lost under these circumstances is usually small. There are many causes that excite congestion of the lungs, some of which reside in adjacent organs, it being common in organic disease of the heart, and particularly in disease of the mitral segments. Pulmonary congestion associated with other affections of the lungs, as well as primary active congestion due to inhalation of hot air, irritating substances, and violent physical exercise, may also result in hemorrhage. Hemorrhagic infarct may lead to slight hemorrhage. Croupous pneumonia — here rupture of the capillaries causes hemorrhage, and the blood when expectorated has undergone a change to a rusty color. Pulmonary tuberculosis is the most common cause. Hemorrhage may take place early when it originates from a sharply limited and minute tubercular focus, and it may also be attributable to congestion. Its source is the mucosa of the small bronchi; later it is the direct consequence of the ulceration of an artery or of the rupture of an aneurysmal sac that has its seat in a branch of the pulmonary artery. Ulcers of the larynx, trachea, or bronchi, where ulcers in the adjacent structures erode the larger branches of the pulmonary artery cause copious and speedily fatal hemorrhages. A case of fatal hemorrhage has been observed by Osler in a case of chronic bronchitis with emphysema. Fibrinous bronchitis induces hemoptysis by rupturing the capillaries in the bronchial mucosa at the time of separation of the bronchial casts. Carcinoma of the lung produces frequent expectoration of blood. Gangrene of the lung is an occasional cause. In very rare instances it may be produced in the course of hemophilia, purpura, scurvy, and it may be an example of vicarious menstruation. Affections of the heart, especially mitral disease may cause it, when it is due to pulmonary congestion. Rupture of aneurysms of a branch of the pulmonary artery, or of the arch of the aorta is a rare cause. Anemia, and certain forms of acute infectious diseases, such as yellow fever, gouty endarteritis are causes. Hemoptysis may result from severe injuries inflicted upon the thorax, and last for several days. Muscular strain or intense mental excitement are causes.

Pathology.—Hemoptysis rarely causes death in itself, so that few opportunities for observing post-mortem appearances are obtained, and when they do occur, the location of the hemorrhage is seldom found. The air-passages are more or less filled with clotted blood; the mucous membrane is swollen, and of a dark red color; rarely, pale and bloodless. The air cells contain blood clots, or are distended with air, the bronchi being filled with clots, preventing its escape. Unless the clots are rapidly removed by expectoration or absorption, a secondary inflammation develops around them.

Symptoms.—Hemoptysis occurring most frequently in pulmonary tuberculosis, we will consider that condition first. In incipient phthisis hemoptysis develops suddenly, as a rule, a warm, saline taste, lasting but a few moments, preceding the expectoration of blood; an attempt to remove which by the act of coughing is followed by warm, bright red, frothy liquid gushing from the mouth and nose. The blood is alkaline in reaction, is mixed with air and mucus, and the quantity raised varies from an ounce to a pint. On seeing the blood, the patient becomes depressed, usually terribly frightened, tremulous and often faints. The extremities become cold, profuse perspiration appears, and if the amount of blood is large, shock, followed by restlessness and more or less fever. The attack may subside in from a half hour to several hours, returning for several days, the expectoration in the meantime remaining either bloody, or showing blood streaks. There may be slight chest pains with the fever following the hemorrhage, the result of the inflammation at the site of the bleeding, which soon subsides, except when blood-clots develop a secondary pneumonia. Auscultation reveals the presence of coarse, bubbling rales in circumscribed areas of the chest. Palpation or percussion should not be practised either during or immediately after the hemorrhage.

During the progress of affections of the mitral and aortic valves, especially in mitral stenosis, hemorrhages occur at considerable intervals; they may be slight, lasting only a few minutes, or quite free, extending over periods of a few days or a week. Pressure of aneurysmal dilatation upon the bronchial mucosa may show small hemorrhages for several weeks. The bleeding point can be discovered with a larynscope, when an aneurysm of the innominate or the aorta impinges upon the trachea. Hemoptysis connected with the menstrual function is of frequent occurrence. Such cases typify a large class that is especially prone to develop pulmonary tuberculosis.

Treatment.—The treatment consists in attempts to stop the hemorrhage and to counteract the bad effects produced by the loss of blood. The first indication cannot always be carried out; when extensive ulceration into a large blood-vessel takes place, the patient may die before anything can be done. A patient with hemoptysis should always be put to bed and kept absolutely quiet; he must be directed to make no effort of any sort, talk as little as possible, must lie in a horizontal position, and any examination must be made in the gentlest way, and it is better not to percuss at all. When the cough is annoying, a subcutaneous injection of morphine should be given; it also slows respiration, lowers the pulse, and is of enormous value in acting favorably upon the psychical condition of the patient, which after even the smallest hemoptysis is disturbed. His diet should be limited to cold liquid food, given in small quantities; small pieces of ice may be taken, but stimulants should not be used unless there is a special indication. An ice bag should be put upon the part affected. The use of ergot in hemoptysis has been quite commonly accepted by physicians in this country, and good results frequently follow its use; yet we find so eminent a therapeutist as H. A. Hare stating that ergot should never be used, mainly because the pulmonary blood vessels have no vaso-motor nerves. That it may do harm if it raises the general blood-pressure is incontestable, that it does so to a marked degree in therapeutic doses is disputed; that, on the other hand, it acts directly on the muscular coat of blood vessels is accepted. If this is the case, the absence of vaso-motor nerves, a point as not yet verified, may be looked upon as of secondary importance. Ergot should especially be used in continued small hemorrhages; given by mouth, or when quick effects are desired, by hypo. Digitalis should never be used for hemoptysis *per se;* it may be required for a heart complication. Adrenalin is successfully used, and is probably the most valuable of all the remedies. Repeated injections may be necessary because its effects are very transitory. Spts. Glonoini in half minim doses every half hour acts promptly. Stypticin or styptol in three-quarter grain doses by hypodermic injection acts favorably. The intrapulmonary pressure may be lowered and the flow of blood consequently lessened by the application of firm ligatures to the limbs. When the bandages are taken off, the pressure must also be reduced gradually or the opposite result, a renewal of the hemorrhage, may ensue. When there is danger of collapse, stimulants, *i.e.,* alcohol camphor, ether, must be used. The physician is here called upon to decide which of the two conditions, the hemorrhage or the collapse, is the more important *quoad vitam.* Hypodermic injections of Emetin have been recommended as superior to adrenalin.

Annual meeting, January 27, 1917, at Brooklyn Hospital, Raymond St. and DeKalb Ave., Brooklyn.

CASES ILLUSTRATING THE FAVORABLE PROGNOSIS IN EXCISION OF CARCINOMA OF THE LARGE BOWEL. PATIENTS.

Richard W. Westbrook, M.D.

Brooklyn-New York.

I WISH to emphasize a few points to-night in showing one or two cases. I have three patients here who have been the subjects of cancer of the colon. It is now several years since their operations and they are apparently perfectly well. They simply illustrate the point which every one ought to keep in mind — the general practitioner and the surgeon — that cancer of the colon is a most favorable type of cancer for cure; and if we can get it fairly early and make a reasonably good excision we can, in a large proportion of cases, actually cure, or delay the further development of the disease for a long time.

The first case which I present is that of a man who was operated on six years ago, lacking two months. His age was then forty-two years, he was a salesman in one of our large department stores, and had been losing weight for a considerable number of months. Four months before I saw him he had begun to have pain in the right side, chiefly of spasmodic character, and three weeks before I saw him was rather alarmed by the presence of bright red blood in his stools. He noticed that an apparent lump developed, which could be seen from time to time, in his right iliac fossa, due to the spasm of the bowel on the proximal side. He was a small man and had lost 12 or 14 pounds in weight, he estimated, but he looked very much emaciated, was pale, the skin was flabby and a tumor of about the size of a small egg could be detected in his lower abdomen, 2 inches below and 2 inches to the right of the navel.

A diagnosis of carcinoma of the cecum was made. The case did not look like a very promising one, but I think that it is a very wise thing to send along to the surgeon cases that are not apparently very promising because we can often do more with them than one would expect.

On making a right rectus incision, this growth was found to involve the cecum, as we had expected, but there was a very large glandular involvement of the mesentery, so large that it seemed as though it was almost a hopeless thing to expect to cure the man. I am not sure just how much we did in the way of making microscopic sections of those glands, but often such glands are not all carcinomatous; some may be inflammatory and they need not hinder one from going on with a rather extensive resection; so here I did about the usual resection. The last 5 inches of the ileum, cecum and ascending colon and half of the transverse colon were removed, doing the operation known as Friedrich's operation, and which has been made more definite by W. J. Mayo—mobilizing the cecum and ascending colon, turning it to one side and taking out a very large area of the mesentery, including all the glands that we could determine to be involved. An anastomosis was made (lateral) and the man made a rather uneventful recovery, except that in this particular case I did not use, as I have used since, a single drain as a precaution in operations on the large bowel, which harbors more infection than the jejunum or stomach. I think it is always wise as a precaution, to let a singule drain go through the abdominal wall. In this case I tried for complete primary union, but got some infection of the abdominal wall, and he has a small hernia as a result.

The patient is here to-night and seems to be in very good condition. I haven't had a chance to strip him, and I don't know whether there is any sign of recurrence, but I saw him not very long ago and he was in very good condition. A very satisfactory result in a case that looked very hopeless!

The second case which I have to show is that of a lady of forty-seven years who had had abdominal pain over a considerable number of months. Six months before I saw her she had been the subject of an abdominal hysterectomy, but the pain continuing she finally came into my hands one night with an acute obstruction. I naturally thought that it was a case of angulation due to adhesions where the hysterectomy had been performed, made a median incision and found no end of adhesions in the pelvis, but none of them sufficient to account for the intestinal obstruction, which was complete; and although vomiting had been fecal it had not been so for long as I happened to see the case fairly early. On searching through the abdomen I found, fortunately for her, an annular carcinoma of the descending colon, just a few inches below the splenic flexure. Cases of carcinoma with early intestinal obstruction are a fortunate type because they come to operation earlier than cases that do not have obstruction, and frequently there is not a great deal of previous pain. I closed the median incision and made an incision in the left side, excised some 5 inches of the bowel and brought the ends out, suturing them in double-barrel fashion, and left Paul's tubes in, closing the fecal fistula later on. That is the proper thing to do in all cases of intestinal obstruction due to cancer. It does not do to make an anastomosis at once where there has been a toxic condition because your patient has thus a very poor chance of life.

This was done June 19th, 1912, so it is not quite four years in this case.

I am showing to-night this lady's husband on account of a very curious coincidence. This gentleman, a little less than three years after the operation on his wife, came to me suffering with abdominal pain. It was spasmodic in character and seemed to be located on the left side. He said he had had it as a child, when it left him, and he had had it as a youth and it left him and now it had come on again. But he was mistaken in the identity of the pain. There were no actual obstructive symptoms. His bowels were moving regularly, but I found on looking him over that he had pretty characteristic symptoms of intestinal encroachment of some sort, so sent him to Dr. Eastmond who made an x-ray picture and found very marked evidences of stricture in the descending colon. We were able to exclude other things, including syphilis, and I advised operation and he, knowing that his wife had had cancer of the descending colon, although she not knowing it, felt the importance of submitting to operation early, and I was able to operate on him on June 5th of last year and found exactly at the point where his wife had had an annular carcinoma, the same thing in the descending colon. In this case there being no obstructive symptoms present, I was able to do an excision of 5 or 6 inches of the bowel and a lateral anastomosis; and although there was some fecal leaking on the fifth day, persisting for some time, he has entirely healed up, gotten back to his normal weight, and is a well man as far as I can determine by examination to-day. It is a very curious coincidence, which I haven't met with before, of a husband and wife having carcinoma of the intestine of the same form at exactly the same place.

I have here the specimen of the carcinoma removed from the man. It shows the usual annular carcinoma of the descending colon.

All these patients have good function of the bowel, all have regained their normal weight, and in each case, pathological examination proved the growth to be adeno-carcinoma.

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

DECEMBER, 1916

MINUTES OF THE 96TH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS,

Held December 19th, 1916.

The President, Dr. Ralph H. Pomeroy, in the chair. There were 250 present. The meeting was called to order at 9:20 p. m., and the minutes of the previous meeting were read and approved as were also the following minutes of a special meeting of the Council to investigate charges against Dr. Thomas Dixon which were read and are as follows:

A special meeting of the Council of the Medical Society of the County of Kings, was held at 1313 Bedford Avenue, Brooklyn, New York City, on December 13th, 1916, to investigate charges made against Thomas Dixon, M.D., a member of this Society, for violating chapter 2, article 1, section 4 of the Principles of Medical Ethics of the American Medical Association which are the principles of the Medical Ethics of the Medical Society of the County of Kings, as provided for by chapter 17, section 1, of the Constitution and By-Laws of the Medical Society of the County of Kings. This meeting was duly held after the personal service upon Dr. Dixon of a copy of the charges made against him with a notice of ten days of a special meeting to be held to investigate the charges and an invitation to him to be present at the meeting. Dr. Thomas Dixon was present at the meeting in response to the invitation extended to him. He admitted that he caused to be published the booklet and an advertisement in the business telephone directory which were the basis of the charges against him. He declined to take any further part in the investigation of the charges made against him or to offer any defense of his conduct unless the President would state that the proceedings were a "trial" of the charges against him. He was informed by the President that the Constitution and By-Laws of this Society provided for an investigation of charges against a member and that it was the purpose of the President and Council to hold such an investigation and that he might take such part in the investigation as in his judgment he deemed proper. He was also informed of his right to legal counsel if he cared to avail himself of it. Dr. Dixon persisted in refusing to offer any defense or explanation of his conduct in publishing advertisements, unless the President would state that the proceedings then occurring were "a trial of the charges against him." Dr. Dixon then withdrew from the meeting of the Council.

It was then regularly moved by Dr. Russell S. Fowler that it was the opinion of the Council that Dr. Thomas Dixon had disregarded and violated chapter 17, section 1 of the Constitution and By-Laws of the Medical Society of the County of Kings and chapter 2, article 1, section 4 of the Principles of Medical Ethics of the American Medical Association and in so doing had done an unprofessional act, tending to defy the traditions and lower the tone of the medical profession and that the Council of the Medical Society of the County of Kings recommend to the Society that Dr. Thomas Dixon be expelled from membership in the Society in the manner provided for by the Constitution and By-Laws of the Society. The resolution was seconded by Dr. Albert Judd, and was carried unanimously by the members of the Council then present with the exception of Dr. Stephen H. Lutz who did not sit as a member of the Council.

The meeting then adjourned.

The Treasurer Dr. Lutz recommended that the dues for 1917 be $13 per year as in the past. It was moved, seconded and carried that the recommendation of the Treasurer be adopted.

Scientific Session.

Address: "Why is the Art of Obstetrics so Poorly Practiced?" By J. Whitridge Williams, M.D., Prof. of Obstetrics, Johns Hopkins University.

Discussed by Dr. John O. Polak, Dr. Robert L. Dickinson.

Report of Council.

The Council reported favorably upon the following applications for membership:

George Kornfeld, 1016 E. 13th St.; Cornell, 1913; proposed by I. D. Kruskal; seconded by L. S. Schwartz; Nov., '16.

By Transfer.

Sherwood M. Whitbeck, 678 St. Mark's Ave.; P. & S., N. Y., 1901; Columbia Co. Med. Soc.; Dec., '16.

Election of Members

The following, duly proposed and accepted by the Council were declared elected to active membership:

Wm. Thos. Allen, 676 Park Pl.; P. & S., N. Y., 1900; proposed by A. E. Shipley; seconded by T. B. Hegeman; Mar., '16.

Samuel Goldman, 152 Hart St.; P. & S., N. Y., 1912; proposed by E. E. Cornwall; seconded by Membership Committee; Oct., '16.

Augustus L. Harris, 458 E. Parkway; L. I. C. H., 1914; proposed by Membership Committee; seconded by Membership Committee; Oct., '16.

Douglas B. Parker, 154 Clinton St.; L. I. C. H., 1912; proposed by D. M. Gildersleeve; seconded by C. P. Gildersleeve; Oct., '16.

Erastus A. Pond, 1087 Dean St.; Bellevue, 1890; proposed by W. H. Steers; seconded by J. R. Taylor; Apr., '16.

Hans Siveke, Foot of Jay St.; Univ. Mich., 1913.; proposed by Membership Committee; seconded by Membership Committee; Oct., '16.

Alec N. Thomson, 835 Park Place; L. I. C. H., 1905; proposed by J. H. Long; seconded by S. J. McNamara; May, '16.

Frederick G. Weygandt, 647 Bedford Ave.; P. & S., N. Y., 1901; proposed by S. C. Blaisdell; seconded by Membership Committee; Mar., '15.

Applications for Membership.

Applications for membership were received from the following:

Edward M. Child, 904 St. John's Pl.; N. Y. Univ., 1877; proposed by J. W. Ingalls; seconded by F. C. Eastman; Dec., '16.

John N. Evans, 909 Bedford Ave.; L. I. C. H., 1916; proposed by W. A. Jewett; seconded by G. H. Reichers; Dec., '16.

Bennett G. Gerzog, 481 Stone Ave.; L. I. C. H., 1907; proposed by L. S. Schwartz; seconded by I. D. Kruskal; Dec., '16.

Joseph Katz, 287 Hinsdale St.; L. I. C. H., 1914; proposed by J. B. Kanter; seconded by M. J. Dattelbaum; Dec., '16.

General Business.

It was moved, seconded and carried that the following changes in the By-Laws be approved and adopted:

1st. The recommendation of the Visiting Committee by Dr. Earl H. Mayne, Chairman.

Dr. Earl H. Mayne reported that the Visiting Committee by unanimous vote recommended that Section 9 of Chapter 20 of the By-Laws of the Medical Society of the County of Kings which reads as follows: "It shall be the duty of the Visiting Committee to visit the sick, infirm or invalid members of the Society" to be changed to read: "It shall be the duty of the Visiting Committee to visit and organize relief for the sick, infirm or invalided members of the medical profession resident in the County of Kings."

2nd. The recommendation by Dr. James M. Winfield:

Dr. James M. Winfield offered the following Amendment to the By-Laws. "Any member who, from infirmity, finds it difficult to meet the Society's obligations may, if he so expresses his desire to the Council be continued from year to year as an active member without payment of dues."

Election of Officers

The Board of Tellers appointed for the election of officers of the Medical Society of the County of Kings for the year 1917 respectfully report that there were 114 votes cast.

The following is the canvass of the vote:

Those elected are indicated by an asterisk. (*)

For President, Albert M. Judd,* received 114 votes.

For Vice-President, Frederick C. Holden,* received 113 votes.

For Secretary, Charles E. Scofield,* received 113 votes.

For Associates Secretary, Lewis P. Addoms,* received 114 votes.

For Treasurer, Stephen H. Lutz,* received 114 votes.

For Associate Treasurer, Robert L. Moorhead,* received 114 votes.

For Directing Librarian, William Browning,* received 114 votes.

For Trustee, Ralph H. Pomeroy,* received 114 votes.

For Censors (five to be chosen), John G. Williams,* received 95 votes; John E. Jennings,* received 100 votes; Simon R. Blatteis, received 59 votes; J. Paul Humpstone,* received 98 votes; Charles Eastmond,* received 102 votes; Frank H. Knight,* received 65 votes. Defective 6 ballots.

For 12 Delegates to the State Society for two years, 1917-1918: William F. Campbell,* received 96 votes; Charles E. Scofield,* received 106 votes; Ames C. Hancock,* received 105 votes; John O. Polak,* received 99 votes; William Linder,* received 88 votes; John C. MacEvitt,* received 101 votes; Sylvester J. McNamara,* received 93 votes; Claude G. Crane,* received 102 votes; Robert F. Barber,* received 101 votes; Thurston H. Dexter,* received 104 votes; Elias H. Bartley,* received 107 votes; John J. Sheehey,* received 83 votes; William B. Bradner, received 74 votes. Defective ballots 5.

For 23 Alternate Delegates to the State Society for one year: H. F. Adams,* received 114 votes; J. L. Bauer,* received 114 votes; G. W. Beatty,* received 112 votes; B. G. Blackmar,* received 113 votes; F. B. Cross,* received 112 votes; C. Duncan,* received 113 votes; R. Durham,* received 114 votes; E. H. Fiske,* received 114 votes; C. A. Hargitt,* received 112 votes; R. Hills,* received 113 votes; T. Howard,* received 112 votes; H. Joachin,* received 114 votes; A. P. Northridge,* received 114 votes; A. Potter,* received 114 votes; J. Pullman,* received 113 votes; J. Raphael,* received 112 votes; R. M. Rome,* received 114 votes; W. S. Shattuck,* received 114 votes; A. D. Smith,* received 114 votes; A. Spingarn,* received 113 votes; C. W. Stickle,* received 114 votes; R. P. Sullivan,* received 112 votes; H. R. Tarbox,* received 113 votes.

(Signed) FRANK HOWARD RICHARDSON,
Chairman.
FRANCIS B. HART,
PHILIP W. T. MOXOM,
FARRAND B. PIERSON,
R. S. ROBERTSON.

Meeting adjourned 10:45 p. m.

CHAS. E. SCOFIELD,
Secretary.

ANNUAL MEETING OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND

The Annual Meeting will be held on January 27, 1917. The President makes the preliminary announcement that the programme will consist of a day of Clinics. The Brooklyn Hospital has placed its wards at the disposal of the Associated Physicians of Long Island for the day, which will be arranged as follows:

BROOKLYN HOSPITAL

Raymond Street and De Kalb Avenue, Brooklyn.

Operative Clinics ....9-11 a. m.
Medical and Surgical Conference ....11-12:30 a. m.
Annual Meeting ....12:30 p. m.
Lunch ....1:30 p. m.

Both Surgical and Medical Clinics will be given in the afternoon at hours to be announced later.

Luncheon will be served at the Hospital.

It is earnestly hoped that a large number of the members will avail themselves of this opportunity.

EDITORIAL

DR. Paul Monroe Pilcher died of pneumonia on January 4, 1917. His former association as Editor of this Journal makes it fitting that some word of appreciation of his services to the Associated Physicians of Long Island should be made here; but the peculiar sadness of his death, terminating a professional life of unusual promise in the very flower of his achievement and the sense of personal loss arising from many years of friendship, preclude more than these few words.

Henry G. Webser.

HEALTH INSURANCE.

A Brief Review of the Proposed Act.

DURING the last two years there has been continued discussion aroused by the introduction in the State Legislature of the so-called Mills Bill, which was offered as a companion to the Workmen's Compensation Act, to provide health insurance for workers receiving less than $100.00 a month. The original bill was not successful but the Committee of the American Association for Labor Legislation has recently presented a third draft containing a number of modifications and additions that are undoubted improvements over the original. Copies of the bill have been sent to a considerable number of physicians and all those resident in Kings County were offered an opportunity to hear the bill discussed by the Chairman of the State Society's Committee on Medical Economics, Dr. Kopetzky. The matter was further amplified at a meeting at the New York Academy of Medicine on Nov. 23rd, where a variety of speakers advanced their views of the bill. The bill is of such importance to the medical profession that it is here reproduced entire:

From the immediate standpoint of the physician. the sections of prime importance are sections 3, 6, 7, 8, 9, 10, 10a, 10b, 10c, 10d, 11, 11a, 12, 13, 14, 15, 16, 18, 43, 56, 57, 58 and 59.

While it is by no means certain that the demand for the immediate passage of an insurance act is as urgent as some advocates of the bill would have one believe, and while some labor leaders have definitely announced that the unions as a whole are antagonistic to it, it is nevertheless certain that sooner or later a health insurance bill will be enacted. It is evident that a certain large percentage of workers are not adequately provided for and that public health and economy both require better safeguards for the self-supporting, self-respecting worker and his family. It has been urged against the measure that the demand for it has not come from the worker himself but has been artificially created for him by certain self-appointed philanthropists who are accused of self-interest in supporting this measure. It is doubtful whether the workers who will be affected by the act could be expected to welcome a provision in their behalf that compels them to put aside a certain definite sum each year to provide against sickness; they now have the dispensaries, the free hospitals and cheap lodge doctors, they can buy patent medicines to their hearts' content, they can get a midwife for five dollars and when they are out of work organized charity looks out for them. Why should they curtail their pleasure to the extent of $2.00 a month when everything is free?

Objections have been raised from another quarter against the participation in the insurance by the state, apparently on the ground that insurance heretofore has been conducted by private enterprise for profit. The one-fifth share that it is proposed that the state shall contribute is regarded as an additional tax that will fall in part and indirectly upon the beneficiary of the act, the working man. In theory this is probably correct; in fact the added tax will be borne by the direct tax payers and will not be a supertax upon the workmen, though it will be upon the employer who is already contributing his two-fifths, but the benefit to the employer in increased efficiency will probably outweight every other consideration.

In discussing the arrangements for safeguarding the interests of the medical profession as a whole as contemplated in the last draught of the proposed bill, the Chairman of the New York State Society on Medical Economics emphasized very strongly the necessity for studying the subject from two points of view—the provisions for adequate representation of the profession by physicians in the various committees that are provided for in the plan being the first, and constructive, phase; and the question of adequate remuneration for medical services being the second, or executive phase. He insisted that no executive details tending to fix fees legally could or should be incorporated in the legislative act, as it would prevent the feasibility of adjustment demanded by local conditions; that is, fees that might be just in rural districts would be improper in cities, and vice versa. He contended that the act provides for a Local Medical Committee (Sect. 10-b) in each district, elected by the physicians of the panels, and by the hospital staffs; that questions they cannot settle are to be referred to the Arbitration Committee (Sect. 14) on which a physician also sits; and this committee may refer its moot questions to the Commission; and that thus medical questions are entirely within the control of physicians through their own elective officers. All this is right. Medical questions are for doctors to discuss and doubtless this arrangement will adequately protect the members of the panels in the just administration of the questions that may vex them in individual cases. But the broad proposition that the proposed service is to be rendered by the medical profession and that they *must* receive adequate remuneration is not specifically incorporated in the bill. Dr. Eden V. Delphey discussed this phase of the subject before a meeting in New York City on November 23, 1916. His remarks are published in full in the New York State Medical Journal (December issue, p. 601). While one may not subscribe to all his conditions his remarks should be generally read and deliberated.

The bill as now framed provides an elaborate interlocking system by which the rights of employer, employee, the state and physician are all thoroughly considered and apparently well safe-guarded, that is, so far as representation of the medical profession in the various administrative bodies are concerned. The question that comes most closely to the profession at large, however, is the purely actuarial one of how much is going to be left to pay the doctor? The more enthusiastic advocates of the bill keep urging the time-worn argument that whereas the beneficiaries under the act are now paying nothing for medical service, they will in future pay large sums so that what was formerly all charity will net a reasonable revenue and they cite the English experience by which physicians who have enrolled under the act have increased their incomes in many instances from twelve to fifteen hundred dollars a year. This is doubtless so, but we find that the act provides specifically for several highly salaried directors, secretaries, clerks, and stenographers, for a well-paid administrative bureau, for a sick benefit equal to two-thirds of the insured's wages for twenty-six weeks, for the payment of hospital bills (in full we suppose), for nursing, for maternity and financial benefits, for surgical and medical supplies, for consultants' fees; and after all these are paid the balance is for the doctors—the doctor who does the work, who has done the work, who is the all-important pivot on which the entire scheme hangs and who, because he is unorganized and is looking out for his individual ends only, comes out at the small end of the horn every time. The Sociologists who have evolved this splendid plan are unwilling to put down a definite proposition whereby the doctor shall be paid first and thus insure without question the participation of all the best men in town. They take it for granted that the younger men who are struggling for a foothold are the ones who will snap at the opportunity and just so surely as the act goes through in its present form without a definite medical fee the present state of inadequate medical service will be perpetuated. This is the weak point in the whole structure and it is this point that the medical profession must hammer at, must clamor for and must insist upon if the act is to be just to the profession and is to insure good medical care for the beneficiaries.

Two points of interest that have been brought out are the correlation of the Public Health Service with the Health Insurance features of the act, and the failure of the act to provide for the very poor.

The first question has been thoroughly discussed by Dr. B. S. Warren, Surgeon in the U. S. Public Health Service (see N. Y. State Journal of Medicine, December issue, p. 597). The act provides for Medical Inspectors in the pay of the Commission who are to be arbiters of what constitutes sickness and when the beneficiary shall be returned to work. Dr. Warren argues that these inspectors should be trained members of the Public Health Service whose knowledge of sanitation, preventive medicine and epidemiology would be invaluable in furthering the general health of the community, through their team work in tabulating statistics, studying epidemics, and so on; and in enforcing sanitary regulations by virtue of the police power vested in them by the State. There is much in his contention that deserves thoughtful consideration, though it is doubtful whether it is wise to inject too much State authority into the medical care of the sick. As at present contemplated the co-operation of the Health Authorities is secured by the presence of the local and State Health Commissioners on the Advisory Committee so that their co-operation is secured.

The other question is one of paramount interest. Only those workers who are earning $1,200 a year, *and are able to keep their assessments paid* are provided for by the act. In the event of inability to pay they are carried for only one week of every four already paid for. Apparently they lapse after that period, except when incapacitated by illness, when the benefit is limited to twenty-six weeks. This leaves a very large part of the population that must still depend on dispensaries and charity for medical care. Should some special provision be made for them by direct State aid? Or shall they be left as at present? It might be wise to wait until the workings of the act for a year or two have demonstrated its strength and weakness before any attempt is made to apply direct Socialistic ideas to solving the problem.

These are but a few of the questions raised by a proposition that the medical profession must study with minute care. Every physician is more or less directly affected by it and only by a thorough understanding of the act can he be brought to realize its far-reaching effect. Readers of the Journal are most earnestly urged to study the very complete discussion of the subject contained in the report of the open meeting of the New York State Society's Committee on Medical Economics printed in the December number of the New York State Journal of Medicine. H. G. W.

Section 1. Title. This chapter shall be known as the Health Insurance Act.

Section 2. Definitions. When used in this act:

"Commission" means the Social Insurance Commission;
"Fund" means a local or trade fund, as the case may be;
"Society" means an approved society;
"Carrier" means the society or fund which carries the insurance;
"Insurance" means health insurance under this act;
"Disability" means inability to pursue the usual gainful occupation.

Section 3. Compulsory Insurance. Every person employed in the state at manual labor under any form of wage contract, unless exempted under Section 4 of this act, and every other employee whose remuneration does not exceed $100 a month, shall be insured in a fund or society, except employees of the United States and except employees of the state or of municipalities for whom provision in time of sickness is already made through legally authorized means which in the opinion of the Commission are satisfactory.

Section 4. Home Workers and Casual Employees. Special regulations shall be made by the Social Insurance Commission for the insurance of home workers and casual employees, or for their exemption from compulsory insurance.

Section 5. Voluntary Insurance.

Self-employed persons whose earnings do not exceed $100 a month on an average;
Persons formerly compulsorily insured who, within one year from the date on which they cease to be insured, apply for voluntary insurance;
Members of the family of the employer who work in his establishment without wages; may insure themselves voluntarily in the local or trade funds of the locality in which they live and of the trade at which they are employed, subject to conditions of this act.

Section 6. Cases in Which Paid. Insured members shall receive benefits in case of any sickness or accident or for death, not covered by workmen's compensation.

Section 7. Minimum Benefits. Every carrier must provide for its insured members as minimum benefits:

Medical, surgical and nursing attendance;
Medicines and surgical supplies;
Cash benefits:
Maternity benefits;
Funeral benefit;
Medical and surgical attendance and medicines for dependent members of their families.

Section 8. Beginning of Right. Insurance, with the exception of maternity benefits, begins with the day of membership. The maternity benefits shall be payable to any woman insured against sickness for at least six months during the year preceding the confinement, or to the wife or widow of any man so insured.

Section 9. Medical, Surgical and Nursing Attendance. All necessary medical, surgical and nursing attendance and treatment shall be furnished by the carrier from the first day of sickness during the continuance of sickness but not to exceed twenty-six weeks of disability in any consecutive twelve months. In case the carrier is unable to furnish the benefit provided for in this section, it must pay the cost of such service actually rendered by competent persons at a rate approved by the Commission.

Section 10. Medical Service. The carriers, subject to the approval of the Commission, shall make arrangements for medical, surgical, and nursing aid by legally qualified physicians and surgeons, and by nurses or through institutions or associations of physicians, surgeons, and nurses. Provision for medical aid shall be made by the carriers by means of either:

1. A panel of physicians to which all legally qualified physicians shall have the right to belong, and from among whom the patients shall have free choice of physician, subject to the physician's right to refuse patients on the grounds specified in regulations made under this act; provided, however, that no physician on the panel shall have on his list of insured patients more than 500 insured families nor more than 1,000 insured individuals;
2. Salaried physicians in the employ of the carriers among which physicians the insured persons shall have reasonable free choice;
3. District medical officers, engaged for the treatment of insured persons in prescribed areas;
4. Combination of above methods.

Section 11. Medical Officers. Each carrier shall employ medical officers to examine patients who claim cash benefit, to provide a certificate of disability, and to supervise the character of the medical service in the interests of insured patients, physicians, and carriers.

Section 12. Medical and Surgical Supplies. Insured persons shall be supplied with all necessary medicines, surgical supplies, dressings, eyeglasses, trusses, crutches and similar appliances prescribed by the physician, not to exceed $50 in cost in any one year.

Section 13. Hospital Treatment. Hospital or sanatorium treatment and maintenance shall be furnished, upon the approval of the medical officer of the carrier, instead of all other benefits (except as provided in Section 16), with the consent of the insured member, or that of his family when it is not practicable to obtain his consent. The carrier may demand that such treatment and maintenance be accepted when required by the contagious nature of the disease, or when in the opinion of its medical officer such hospital treatment is imperative for the proper treatment of the disease or for the proper control of the patient. Cash benefit may be discontinued during refusal to submit to hospital treatment. Hospital treatment shall be furnished for the same period as cash benefit. This benefit may be provided in those hospitals with which the funds and societies have made satisfactory financial arrangements which have met the approval of the Social Insurance Commissioners, or in hospitals erected and maintained by the funds and societies with the approval of the Commission.

Section 14. Arbitration Committee. All disputes between the insured and physicians, or between funds and physicians concerning medical benefits shall be referred to special committees composed of representatives of the interests concerned with an impartial chairman appointed by the Commission, with an appeal to the Commission.

Section 15. Cash Benefit. A cash benefit shall be paid beginning with the fourth day of disability on account of illness; it shall equal two-thirds (66-2/3 per cent) of the weekly wages of the insured member. It shall be paid only during continuance of disability, and shall not be paid to the same person for a period of over twenty-six weeks in any consecutive twelve months.

Section 16. Cash Benefit to Dependents. A cash benefit equal to one-third of the wages of an insured member receiving hospital treatment shall be paid to his family or other dependents while he is in the hospital.

Section 17. Periods of Payment. Cash benefit shall be paid weekly where possible, and in no case less frequently than semi-monthly.

Section 18. Maternity Benefits. Maternity benefits shall consist of:

All necessary medical, surgical and obstetrical aid, materials and appliances, which shall be given insured women and the wives of insured men;

A weekly maternity benefit, payable to insured women, equal to the regular sick benefit of the insured, for a period of eight weeks, of which at least six shall be subsequent to delivery, on condition that the beneficiary abstain from gainful employment during period of payment.

Section 19. Funeral Benefit. The carrier shall pay the actual expenses of the funeral of a deceased insured member, as arranged for by the family or next of kin, or in absence of such by officers of the fund, up to the amount of $50. The funeral benefit shall be paid in case of death of a former member while in receipt of cash benefits, or death within six months after discontinuance of cash benefits because of the exhaustion of the time limit, provided he has not, within those six months, returned to work.

Section 20. Additional Benefits. The carriers may grant additional or increased benefits, with the consent of the Commission.

Section 21. Extension of Insurance. When contributions cease on account of unemployment not due to sickness, the insurance shall continue in force for one week for each four weeks of paid up membership during the preceding twenty-six weeks.

Section 22. Division of Expenses. The expenses of the funds shall be met by contributions from employees, employers and the state. The state shall contribute one-fifth of the total expenditures for benefits, subject to the provisions of Section 42; one-half of the balance shall be paid by the employer, one-half by the employee, except that if the earnings of the insured fall below $9 a week, the shares of the employer, employee and state shall be the proportion indicated in the following schedule:

If earnings are under	But not under	Employer	Employee	State
$9	$8	48%	32%	20%
8	7	56%	24%	20%
7	6	64%	16%	20%
6	5	72%	8%	20%
5	..	80%	0%	20%

In all cases the contributions shall be computed as a percentage of wages.

Section 23. Amount of Contributions. The amount of the contributions shall be computed so as to be sufficient for the payment of benefits and the expenses of administration of the fund and necessary reserve and guarantee funds.

Section 24. Rates of Contributions. In funds in which employees in several industries are insured, the percentage rates of contribution may be different for different industries, according to the sickness experience.

Section 25. Division of the State Into Districts. The Commission shall, within six months after this act goes into effect, divide the state into districts, no one of which shall contain less than five thousand persons subject to compulsory insurance; and shall establish one or more local or trade funds in each district.

Section 26. Authorization By Commission. No fund shall begin business until it is authorized by the Commission. The Commission shall authorize a fund only after approval of its constitution and after the names and addresses of the board of directors elected for the first year have been filed with the Commission.

Section 27. Powers of Funds. Funds shall have all the power necessary to the carrying out of their duties under this act.

Section 28. Constitution of Fund. Subject to the provisions of this act, the constitution of a fund shall contain:

Name of the fund and location of its principal office;
If the fund is a trade fund, designation of the trade or trades for which it is created;
Maximum percentage of wages in each occupation at which the regular contribution may be fixed;
Nature and amount of benefits and length of time during which they shall be given;
Manner of election, number, powers, duties, and time of meeting of the committee;
Number, powers, duties, and time of meeting of the board of directors;
Method of amendment of constitution;

and such other provisions as may be directed by the Commission.

Section 29. Committee of the Fund. There shall be a committee of each fund which shall consist of not less than twenty and not more than one hundred members, to be elected annually in the manner provided in the constitution, one-half by and from the employer members of the fund, one-half by and from the employee members. The committee shall pass upon the annual account and report submitted by the directors.

Section 30. Employers' Votes. Each employer member shall have as many votes for employer members of the committee as he employs workmen subject to the insurance and members of the fund, except that no one employer shall have more than 49 per cent of the total vote cast by employers unless otherwise provided in the constitution.

Section 31. Board of Directors. The board of directors shall be elected by the committee for a period of one year. All directors must be citizens of the United States. The board shall consist of not less than eight and not more than eighteen directors, one-half of whom shall be elected by employer members of the committee, and one-half elected by employee members of the committee. No one shall be a member of the committee and a director at the same time. The compensation of members of the board shall not be more than $5 a day for each day of attendance upon the meetings of the board.

Section 32. Reserve. Every local or trade fund shall accumulate a reserve. The board of directors shall transfer to such reserve one-twentieth of the annual income of the fund until such reserve is equal to one-sixth of the total expenditures for the preceding three years. The reserve shall be maintained at this level. Any surplus which may accrue from the investment of such reserve may be transferred into the general account of the fund.

Section 33. Payment of Contribution. Every employer must pay to any local or trade fund on the date on which he pays his men, or at least monthly, the total contribution due from each employee from his wages, but must inform him, in a method to be approved by the Commission, of the amount so deducted.

Section 34. Membership in Fund. Every person subject to insurance shall be an insured member of the trade fund of the trade at which and in the district in which he is employed; or if there be no such fund, of the local fund of such district; provided that while he is a member of an approved society he shall be excluded by the board of directors from membership in the fund. The Commission shall provide by regulation for the case of persons regularly occupied at one trade but temporarily employed at another. Membership in a local or trade fund shall cease as soon as the insured becomes a member of another local or trade fund. Any employer shall be an employer member of all funds of which any of his employees are members.

Section 35. Voluntary Insurance. A person entitled to voluntary insurance must be admitted on application to membership in the trade fund of his trade in the district in which he is employed, or if there be no such fund, then in the health fund of such district: Provided, That, except for persons who have been compulsorily insured members within the last twelve months, the by-laws of any fund may prohibit the admission to voluntary insurance of a person who has not passed a satisfactory medical examination by its medical officers, and that the application for admission be subject to the same condition as an application for ordinary life insurance. The contribution of the voluntary member shall be equal to the contribution required of the employer and employee for a compulsory member of the same trade and earnings.

Section 36. Loss of Voluntary Membership. A person voluntarily insured loses his membership if he acquire membership, either voluntary or compulsory, in another fund or society, or if he be in arrears for one month in the payment of his contributions, unless this period be extended by the constitution.

Section 37. Fines and Penalties. Funds may fine their employer and insured members and suspend insured members from benefit for violation of their rules or regulations or for fraudulent representations made with the intent of securing or aiding another to secure benefits, in accordance with rules approved by the Commission providing for such fines or suspensions. If an employer fail or refuse to pay the contribution which he is required to pay under this act the carrier to whom they are due may recover the whole sum with interest at 6 per cent by suit in a court of competent jurisdiction, and the employer shall not be entitled to deduct any part of the sum from the wages of his employee or employees.

Section 38. Approved Societies. A labor union, benevolent or fraternal society or an establishment society shall be approved by the Commission only after hearing the local or trade funds affected and only if:

It is not carried on for profit, but reasonable salaries paid officials shall not be considered profit;

It is under the absolute control of the insured members in so far as the insurance regulated by this law is affected, except that the employer may appoint one-half of the governing body of an establishment society;

It shall satisfy the Commission that it is in a sound financial condition.

It grants at least the minimum benefits provided in this act;

It has a membership of at least five hundred persons insured for at least the minimum benefits provided under this act or their equivalent, except that in the case of establishment societies in which the employer satisfactorily guarantees the payment of benefits, the number of members may be fixed by the Commission;

Its operation will not, in the opinion of the Commission, endanger the existence of any local or trade fund;

In case of an establishment society, a majority of the employees subject to insurance request approval, and the employer's contribution is at least equal to that of all the employees.

The approval of the Commission may be withdrawn at any time upon its finding, after hearing the society affected, that any of the required conditions are no longer satisfied. The Commission may, after a hearing, permit an establishment society to accept, on conditions satisfactory to the Commission, as members all persons subject to insurance in its district.

Section 39. Employers' Contributions. The Commission shall assess, upon every employer any of whose employees are insured in labor union, benevolent, or fraternal societies, a sum equivalent to the employers' contributions had such employees been members of funds. This sum shall be paid in monthly instalments into the guarantee fund established by the Commission.

Section 40. State Contributions. The state shall contribute to every approved society one-fifth of its total expense for benefits and for the expense of Health Insurance under this act, subject to the provisions of Section 42.

Section 41. Health Insurance Union. Two or more health insurance carriers within a district may combine for the administration of the medical benefit subject to the approval of the Commission. The Commission may, after notice to and hearing of the parties of interest, withdraw its approval and dissolve the union, making such disposition of its property as may seem to it in the best interests of the insured.

Section 42. Guarantee Fund. The Commission shall reserve 10 per cent of the contributions of the state to the carriers and pay it into a fund to be known as the guarantee fund, from which it shall contribute for the relief of any carrier on the application of its board of directors after investigation by the Commission. A contribution shall be made only where, in the judgment of the Commission, the necessity arises from epidemic, catastrophe, or other unusual conditions, and shall never be made where, in the opinion of the Commission, the deficit is due to failure or refusal of the directors to levy proper rates of contributions. When and as long as, in the opinion of the Commission, the guarantee fund is sufficient, the Commission shall make no reservation for this purpose.

Section 43. State Social Insurance Commission. A state Social Insurance Commission is hereby created, consisting of three commissioners, to be appointed by the governor, one of whom shall be designated by the governor as chairman, and one of whom shall be a physician. The term of office of members of the Commission shall be six years, except that the first members thereof shall be appointed for such terms that the term of one member shall expire on January first nineteen hundred and eighteen; one on January first, nineteen hundred and twenty, and one on January first, nineteen hundred and twenty-two. Each commissioner shall devote his entire time to the duties of his office, and shall not hold any position of trust or profit, or engage in any occupation or business interfering or inconsistent with his duties as such commissioner, or serve on or under any committee of a political party. The Commission shall have an official seal which shall be judicially noticed.

Section 44. Secretary. The Commission shall appoint and may remove a secretary, at an annual salary of ——. The secretary shall perform such duties in connection with the meetings of the Commission and its investigations, hearings and the preparation of rules and regulations under the provision of this act, as the Commission may prescribe.

Section 45. Officers and Employees. The Commission may appoint such officers, other assistants and employees as may be necessary for the exercise of its power and the performance of its duties under the provisions of this act, all of whom shall be in the competitive class of the classified civil service; and the Commission shall prescribe their duties and fix their salaries which shall not exceed in the aggregate the amount annually appropriated by the legislature for that purpose.

Section 46. Salaries and Expenses. The chairman of the Commission shall receive an annual salary of —— and each other commissioner an annual salary of ——. The commissioners and their subordinates shall be entitled to their actual and necessary expenses while traveling on the business of the Commission. The salaries and compensation of the subordinates and all other expenses of the Commission shall be paid out of the state treasury upon vouchers signed by at least two commissioners.

Section 47. Offices. The commission shall have its main office in the capitol of the state and may establish and maintain branch offices in other cities of the state as it may deem advisable. Branch offices shall, subject to the supervision and direction of the Commission, be in immediate charge of such officials or employees as it shall designate.

Section 48. Powers of Individual Commissioners. Any investigation, inquiry or hearing which the Commission is authorized to hold or undertake may be held or undertaken by or before any commissioner, and the award, decision or order of a commissioner when approved and confirmed by the Commission and ordered filed in its office shall be deemed to be the award, decision, or order of the Commission. Each commissioner shall, for the purpose of this act, have power to administer oaths, certify to official acts, take depositions, issue subpoenas, and compel the attendance of witnesses and the production of books, accounts, papers, records, documents and testimony.

Section 49. Powers of Commission. The Commission may adopt all reasonable rules and regulations and do all things necessary to put into effect the provisions of this act.

Section 50. Jurisdiction of Commission To Be Continuing. The power and jurisdiction of the Commission over each case shall be continuing, and it may, from time to time, make such modification or change with respect to former findings or orders thereto as in its opinion may be just.

Section 51. REPORT OF COMMISSION. Annually on or before the first day of February the Commission shall make a report to the governor, which he shall lay before the legislature, which shall include a statement of the apportionment of the state contribution, statistics of sickness experience under this act, a detailed statement of the expenses of the Commission, the condition of the state guarantee fund, together with any other matter which the Commission deems proper to report, including any recommendations it may desire to make.

Section 52. SOCIAL INSURANCE COUNCIL. The social insurance council shall consist of twelve members, six of whom shall be elected by employer directors of the local and trade funds and six by employee directors of the local and trade funds; their term of office shall be two years, except that in the first election three of the employer and three of the employee members of the council shall be elected for one year; they shall receive a compensation of —— a day for each day spent on the business of the council and shall be reimbursed for reasonable expenses.

Section 53. OFFICERS OF COUNCIL. The council shall elect a president from its own number; the secretary of the Commission shall act as the secretary of the council.

Section 54. MEETINGS OF COUNCIL. The council shall meet during the first week of December, of March, of June, of September, each year. Special meetings shall be called by the president on the request of at last five members of the council or of two members of the Commission, at any time.

Section 55. DUTIES OF COUNCIL. The annual report and recommendations of the Commission shall be laid before the December meeting of the council before transmission to the governor, and the council may approve them or make a separate report and recommendations to the governor. All general regulations proposed by the Commission shall be laid before the council at a regular or special meeting for discussion before final adoption, except in cases of urgency, to be determined by the Commission, and in this case the regulation shall be laid before the next regular meeting of the council or a special meeting called for the purpose.

Section 56. MEDICAL ADVISORY BOARD. The state medical societies shall choose a medical advisory board which shall be consulted on medical matters.

Section 57. SETTLEMENT OF DISPUTES. All disputes arising under the act, except those provided for in Sections 14 and 58, shall be determined by the Social Insurance Commission either on appeal from the proper authority or from the carrier or, in case of dispute between carriers, by original proceedings. The Commission may assign any dispute for hearing and determination to a dispute committee composed of one employer and one employee member of the council, and a member of the Commission, as chairman, the members of the council to serve in turn on the dispute committee for periods of one month; either party may appeal from the decision of the dispute committee to the Commission within thirty days from the date of rendering the decision.

Section 58. MEDICAL DISPUTES. All disputes regarding medical benefit which have been appealed to the Commission shall be referred by the Commission to the medical advisory board which shall report to the Commission and the Commission shall not decide any such dispute until after a report has been made by the board.

Section 59. SUITS AT LAW. Suit shall not be brought in any court on any matter on which an appeal is allowed to the Commission, until after a decision by the Commission or of a dispute committee, and the statutes of limitations shall not begin to run in such cases until after decision of the Commission or dispute committee is filed.

Annual Meeting, January 27, 1917, at Brooklyn Hospital.

(See Page 16.)

CORRESPONDENCE.

Should Christian Science Treatment be Regulated or Should it Not?

The Editor of the Long Island Medical Journal.
Sir:

The Long Island Medical Journal (November issue) with its editorial on Church Healing reached me on a day in which a great deal of my time had been occupied in responding to telephone calls from representatives of the Press who desired to know the full particulars of a case which had been treated by Christian Science and in which I was summoned solely for diagnosis.

The editorial in question seemed so important to the public at large that I communicated with the editor and he told me that the columns of this journal would welcome the views of any member of the Associated Physicians of Long Island, whose experience had given him a different angle of vision; and so at the risk of being prolix, I will note how my relations to this case, have clarified to me the line of demarcation between medical treatment and Christian Science.

I was summoned to see a sixteen-year-old girl, the father telling me on my arrival, that he thought she had probably strained herself in school gymnastics, and that she was being treated by a Christian Science practitioner for "backache." I made an examination and told them that there was an acute nephritis, or, as I put it to them, that there was a congestion or inflammation of the liver and kidneys, the "backache" being but a minor symptom. They told me that they desired to continue with Science treatment and had called me in for diagnosis only, and now that they had learned what the matter was they would continue treatment.

A week passed and the father called at my office and requested me to call, saying that the neighbors had noised about that the child had infantile paralysis. I did so, examined her carefully and said, "There is not the slightest sign of any infantile paralysis, and I will stand right by you and tell that to the family living upstairs or any of your neighbors that you desire. It is not fair play to spread baseless rumors that way." I said, "I will tell them precisely what *is* the matter with the child. She has an acute inflammation of the kidneys and an involvement of the portal circulation." They said, "You need not do that, Doctor, just say that she has not infantile paralysis." I said, "No, the best way is to be perfectly frank, otherwise they might think that you were concealing something." The healer said to me, "Doctor, you don't understand, if you do that you will interfere with my treatment."

I said, "I don't get what you mean, how could I interfere?" She said, "Why if you tell them all that, there will be just that much more error to overcome." I said, "You mean then, that in your treating a case, you do not want to know the extent of the disease or the complications, because the less you know the less you have to overcome," and she said. "Yes, that is it."

Two days afterward I was again called; abdominal dropsy had developed. I told them that in my opinion the case was now beyond medical aid, that she was too weak to consider an operation, and that death would occur within forty-eight hours. It did, and in making out a death certificate, I gave as the cause, Pressure from Abdominal Ascites; contributory, Acute Nephritis.

Accompanying the certificate was a memorandum that the case had been under Christian Science treatment and that I had been called in not for treatment, but for diagnosis. I also stated, in the interest of fair play, that Christian Science treatment had been of the young girl's own volition. The parents took a great deal of comfort from the fact that the dropsy that had so distended the abdomen had largely "disappeared under Christian Science treatment." If I had told them that the osmosis of the fluid into the thoracic cavity, causing pressure on the heart and lungs was the primary cause of death, I would have been a brute. Why attempt to destroy the peace of mind of those stricken parents when they are satisfied? Why summon the "healer" to a coroner's inquest when she is acting within the law?

It is the law that is to blame for a tragedy like this and not an individual. Judge Hylan says, "Lawyers are practically in control of the legislative branch of our government, and lawyers are being elected and appointed to administer the offices in the executive branch. Therefore we have a government of lawyers, by lawyers and, I might say, for lawyers, at the expense of the taxpayers and others." Why have our lawmakers permitted such a travesty on justice to exist as to permit to practice, a Christian Scientist without any knowledge of bacteriology, chemistry, anatomy or physiology, and yet summon her before the coroner if the case dies?

We, as physicians, are concerned with the health of the community. Of what use are laws to quarantine and culture diphtheria, if permission is extended to unqualified Christian Science healers to practice, when they admittedly do not wish to know the progress of disease, or the involvement of dyphtheritic membrane for that would be so much more "error" to overcome?

A short while ago at Plymouth church, a memorial service was held to commemorate the life of one of the princes of our profession, a man whose life had been spent in unselfish devotion to the healing of the sick, and as one who had found his skill and experience valuable in the consultation room, I could testify that the words of eulogy pronounced by one of America's greatest preachers, were words of truth, and as Dr. Hillis concluded his address, an address of simple tribute to the medical profession of Brooklyn as illuminated by the life of John McCorkle, he quoted from the 38th chapter of the book of Ecclesiastes, the 4th verse, "The Lord has created medicines out of the earth and he that is wise will not abhor them."

At one of the great mass meetings of men at the Bedford Y. M. C. A., another eminent Brooklyn divine of world wide reputation in reply to his views on Christian Science replied, "It is neither Science nor Religion." To the question, "Why is it that Catholics do not take up with Christian Science?" he said, "Because the Catholics have more sense."

I am told that the Christian Scientist says that Jesus Christ made a good demonstration, but that Mary Baker Eddy made an even better demonstration than Jesus Christ. But the aspect of Christian Science is the problem of the theologian.

From the standpoint of healing and alleviating suffering the issue is defined. Christian Science does not desire the X-ray, the research of the laboratory or the findings of the diagnostician because there will be that much more "error" to overcome. Permitting Christian Scientists to practice when these principles are definitely stated and then summoning them to court when one of their patients dies or "passes on," is contradictory and against the principle of the square deal.

This is not written to condemn Christian Science *in toto.* I believe there is a great deal of good in Christian Science and I believe there are thousands who can attest its benefits just as I believe there are thousands who have been benefited by their firm and unwavering belief in the Catholic and the Protestant religions. Anyone who has ever visited the shrine of St. Anne de Beaupre near Montreal can never forget the lesson. But I do believe, and I am strongly convinced that many charlatans, tempted by the lure of financial reward, have enlisted under the banner of Christian Science.

They are the ones that are hurting Christian Science. They should be weeded out. The wheat should be separated from the chaff and the only way to do this is by regulation and conformity to a law that all who desire to practice the healing art must pass an examination in basic principles as to qualification, and then supervision by leaders of their own sect.

The practice of medicine is broadening. Years ago independent thinking classed a physician no matter how successful, beyond the pale. Now a basic education in fundamental principles is insisted upon, while his system of therapeutics, the product of his experience, is as much his right, as is the right of a clergyman to select his denomination or as is the prerogative of the judge to interpret the law. This is not a problem for the physician alone to meet. This is an issue in which all citizens of the state of New York are vitally concerned. Either Christian Science healing should be regulated and practitioners allowed to practice only after examination, or the bars regulating medical practice should be let down. Either Toleration or Persecution should cease. The Health of the Community depends upon the Correct Solution.

William Lathrop Love, M. D.

BIRTH CONTROL AND INFERIOR CHILDREN.

Editor Long Island Medical Journal,
Dear Doctor:

I am glad to see that the November issue of the Long Island Medical Journal has two papers on birth control, one original article and one editorial. For many years it was impossible to get medical journals to touch the subject, but things have undergone a radical change. While some medical journals are still antagonistic to the Birth Control Movement, antagonism is better than silence, for it is only by discussing the merits and the demerits of any movement that the truth can come out.

In his paper entitled "Eugenics and Birth Control," Mr. C. L. Redfield makes a statement which must not be permitted to go unchallenged. He asserts that persons of twenty have a lower mentality than persons of thirty, persons of thirty have a lower mentality than persons of forty, etc., and that children inherit the mentality which their parents had at the time of conception. Consequently children born from younger parents will have a lower mentality than those born of older parents.

I am not going to discuss the correctness of this assertion, though Mr. Redfield is evidently not familiar with Dr. Vaerting's work, who has written a book giving numerous proofs that the children born of young parents are superior mentally to those born of older parents. This is not the point I wish to discuss. But Mr. Redfield makes the following statement, "If birth control has any object, it is to enable parents to limit their families to one, two or three children *produced soon after marriage."* (Italics mine.)

But this is distinctly and emphatically untrue. The people who wish birth control information wish it because they do not desire to have children *immediately* after marriage. It is soon after marriage, when people are young and not yet established, that their financial condition is at its worst, and they want to wait a few years until their economic condition is more secure, and then they are perfectly willing to have children. There are thousands and thousands of young couples who would marry if they were not afraid of being burdened at once with children. But when they acquire the contraceptive information they do get married, then wait five or six years, and then have as many children as their circumstances permit.

This being so, Mr. Redfield's next statement, that a general application of birth control would quickly give us nothing but feebleminded stock, falls to the ground. That those who have had two, three or four children would use the contraceptive knowledge to prevent a further increase is true. But that is certainly no calamity from either an individual or racial standpoint. While I put very little stock in the superiority or inferiority of the first, second, or ninth child, etc., still if anything may be considered more or less in the nature of a fact it is this: that in large families the fifth, sixth, seventh, eighth, etc., are *apt* to be weaker both physically and mentally.

Mr. Redfield mentions a few names of what he calls great men, though they are decidedly, with one or two exceptions, rather mediocre, who were the late children of numerous families. By this kind of reasoning we can prove nothing. And I can certainly match Mr. Redfield with much stronger names, names that he himself would admit are much more eminent, much greater, than those he mentions. For instance, one of the world's greatest poets, Goethe, was a first child. One of the world's greatest religious reformers, Martin Luther, was a first child. One of the world's greatest philosophers, Herbert Spencer, was a first child. One of Germany's sweetest singers, Friedrich von Schiller, was a first child. And so was Heinrich Heine. The discoverer of the circulation of the blood, William Harvey, was a first child. John Stuart Mill, one of the world's greatest political economists, was a first child. Sir Isaac Newton, whom certainly even Dr. Redfield will acknowledge to be a genius of the first magnitude, was a first child. Immanuel Kant, whose philosophy still influences us today, was a first child. Lord Byron was a first child. Galileo, with whom we believe, in spite of the reactionaries, that the world does move, was a first child. Henrik Ibsen, one of the world's greatest dramatists, was a first child. And so I could go on and on and on. And I could give a very great number of second children who were among the world's greatest geniuses.

In a paper that is forthcoming shortly, I intend once for ever to thresh out the ridiculous and untrue statements about the physical and mental inferiority of the first born. In the meantime I shall only call attention to an article in The Journal of Heredity (September, 1916), entitled, "The Long Lived First Born," which deals with the fallacy that the first born is shorter lived than the subsequent children.

We are glad to listen to the other side, but if the opponents of the Birth Control Movement want to influence the clear thinking portion of humanity, their arguments will have to be stronger, more scientific than they have been up to the present time.

WILLIAM J. ROBINSON, M.D.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting of the Society held at the Building of the Medical Society of the County of Kings, 1313 Bedford Avenue, on Thursday, Oct. 5th, 1916.

The President, John E. Jennings, M.D., in the Chair.

Program.

Report of cases:
A. (1) Thrombo Arteritis. Patient.
(2) Musculo-Spiral Paralysis Following Dislocation of Shoulder. Patient.
Robert F. Barber, M.D.
B. (1) Congenital Pyloric Stenosis.
(2) Imperforate Anus.
(3) Perforated Gastric Ulcer.
(4) Gall Bladder Case.
Herman F. McChesney, M.D.
Paper: "Indications for Cholecystectomy and Technique of Operation." Illustrated by Lantern Slides. Russell S. Fowler, M.D.

Discussion opened by Thomas B. Spence, M.D., Arthur H. Bogart, M.D. and Henry F. Graham, M.D.

Musculo-Spiral Paralysis. Patient.

Robert F. Barber, M.D.

Mr. V. A., age 46, a Swede, was admitted to the Long Island College Hospital in August, 1916.

Chief Complaint: Pain in the left shoulder and loss of function of the left arm and hand.

Family and Personal History: Negative.

Present Illness: The patient was piling cases, his foot slipped and he fell, striking his left arm near the shoulder on the edge of a butter tub. In fifteen minutes he noticed a numbness and tingling of the left hand and impaired movement. After three days and nights of continuous pain and disability he came to the hospital.

Physical Examination: Shows loss of function of the left arm. He cannot elevate the shoulder, supinate the forearm or extend the forearm or wrist or move the fingers. There is a sub-glenoid dislocation of the left humerus. There is complete loss of sensation over the ulnar side of the hand and partial loss of sensation over the entire dorsum of the fingers, hand, wrist and forearm and the palmar surface of the fingers. There is pulsation in the radial artery.

Treatment: Dislocation reduced without an anesthetic by the Kocher method. The arm was immobilized for five days. Active and passive motion was then begun. The forearm and hand were soaked for ten minutes three times a day in hot water and massaged with cocoa butter. It is now over five weeks since the injury and in that time there has been a steady, but gradual improvement in both motion and sensation. The paralyzed muscles are now functionating very slightly, and it looks as if the prognosis for a complete recovery were good.

Thrombo-Angitis Obliterans. Patient.

Robert F. Barber, M.D.

Mr. M. K., age 47, Russian-Jew, was admitted to the Long Island College Hospital in August, 1916.

Chief Complaint: Complete disability from pain in the toes of the right foot.

Family History: Negative.

Personal History: The patient smokes fifteen to twenty cigarettes a day; otherwise negative.

Present Illness: For the past fifteen years the patient has had pain in the toes continuously. The pain is worse when the limbs are elevated. Intermittent claudication has been present from the start, getting progressively worse. Because of gangrene, six years ago the left foot was amputated, and three years ago the left leg was removed by amputation through the upper third. Seven years ago he had a spontaneous amputation of the end of the great toe of the right foot and part of the small toe at the same time. Several months ago ulcers appeared on the dorsal aspect of the great toe and later the second and third toes. These were present at the time of admission to the hospital. He says that his foot feels cold and that his hands are numb and blue or white in cold weather.

Physical Examination: Shows a well-nourished, intelligent-looking Russian-Jew. Head, special organs, chest and abdomen negative.

Extremities: Left leg amputated below the knee—good stump. The end of the right great toe and small toe are missing. There are trophic ulcers on the dorsum of the great, second and third toes. The foot feels cold. No arterial pulsation felt.

Laboratory Findings: Urine negative. Blood picture normal. X-ray plate shows no calcareous vessels. Wassermann negative.

Treatment: Following the treatment reported by Koga in 1913 and by Ochsner, Willy Meyer and McArthur in this country, the patient was given subcutaneous injections of 500 c.c. of Ringer's solution. From August 25th to October 1st he has had fifteen injections and we expect to give him twenty-four in all. The injections had a three-fold effect: first, total relief of pain; second, spontaneous cure of the ulcers; and, third, a dull, drowsy feeling all the time the injections were being given. The interval had to be lengthened at the end of one week because of this last effect.

Although this relief is probably temporary, it may last for one or two years and is much more satisfactory than amputation. The latter is still left as a last resort, as it should be.

Musculo-Spiral Paralysis Following Dislocation of Shoulder. Patient.

Robert F. Barber, M.D.

Dr. John A. Lee, in discussion, said:

"I had rather an unusual experience in having two of these cases come into my service on the same day about six months ago. Both of them had dislocations. Both had musculo-spiral paralysis. One case began to show steady signs of improvement after reduction, and, until I lost track of him, he made quite an appreciable advance. In the other case I happened to follow the patient for two or three months and there was no evident sign of iuprovement. I feel the history of most of these cases is that after about a year, unless there has been great damage done to the nerve, you get a pretty satisfactory ability to use the arm."

Thrombo-Arteritis. Patient.

Robert F. Barber, M.D.

Dr. Walter A. Sherwood, in opening the discussion, said:

"I would like to ask Dr. Barber how he distinguishes cases of thrombo-arteritis from Raynaud's disease."

Dr. Robert F. Barber, in closing the discussion, said: "The gangrene which results from these cases of arterial block occurs in four types of cases. It comes first from the ordinary senile gangrene, with which you are all familiar, and is block due to endarteritis obliterans. Then there is the type due to diabetes, and the type which is due to syphilis, but those are really other types of arteriosclerosis with an obliterating endarteritis. In Raynaud's disease there is a spasm of the vessels which is not permanent, so that between the attacks of intermittent claudication in Raynaud's disease one should find pulsation in the arteries. This man has no pulsation in his arteries. The arteries in this case were examined. He came to us with a diagnosis of thrombo-angitis obliterans. They were examined, I believe, in Roosevelt Hospital. The arteries in Raynaud's disease are supposed not to be diseased—supposed not to be pathological. In thrombo-angitis obliterans the artery wall is almost normal except that it has the remains of an acute inflammatory process in the media. The lumen of the vessel, instead of being normal, contains a plug or thrombus which has resulted from this acute inflammatory process in the media. The acute stage of the disease is very rarely seen. The stage which we see is the stage which has come on as the result of formation of the thrombus and resulting obliteration of the artery and cutting off of the circulation. These cases all give the symptoms of intermittent claudication, which is sometimes called the disease, but it is really a disturbance of the vascular system. Cutting off of the arterial supply will produce more or less cramp in the muscles when the patient uses them."

Perforated Gastric Ulcer.

H. F. McChesney, M.D.

Case No. III. E. C., 40 years old, iron worker, 112 Duffield St., white, married.

Patient brought to hospital in ambulance at 7 p. m., June 10th, 1916.

Family History: No predisposition.

Past History: Diseases of childhood. Lead poisoning fourteen years ago. Had chancre twenty years ago. Cough with productive expectoration. Sputum dark tinged probably due to inhaled iron dust.

Gastro intestinal History: Four years' duration, burning pain in epigastrum, relieved somewhat by eating. Vomits occasionally. Stools dark in color. Soreness near spine, no night pains or jaundice.

Present History: While at work on the afternoon of the day of admission patient was suddenly stricken with severe pain in epigastric region. "Doubled up" twenty minutes later, vomited watery fluid, pain became general and then more intense below umbilicus. Complained of faintness and had profuse cold perspiration.

Physical on Admission: Well developed and nourished adult male. Shock quite pronounced, pulse rapid, extremities cold, tongue dry.

Head and Neck: No teeth; otherwise negative.

Thorax: Slight emphysema.

Heart: Outlines normal, rather poor muscle tone, no murmurs heard.

Abdomen: Rigid over entire abdomen. Tenderness general. No masses palpable.

Extremities: Cold. Knee jerks exaggerated but equal, no edema. Fingers clubbed.

Patient prepared for immediate operation, dry shave.

Laboratory Findings: W. B. C. 22,800, Polys. 95%.

Urine: Trace of albumen. Hyaline and Granular casts.

Operation: One hour. Ether anesthesia. High right rectus incision four inches long. Peritoneal cavity contained much dirty looking fluid, curdled milk, flakes of bread, general peritonitis.

Stomach: Indurated area, size of palm of hand on anterior wall of stomach. In centre of this area, a perforation size of a marble. Tissue about the perforation extremely friable. The perforation was three inches from the pylorus and nearer the greater curvature.

It was impossible to invert the opening with purse string suture due to friable tissue. Perforation folded in with two long linen sutures. Posterior gastro-enterostomy done. Peritoneal cavity flushed with saline. Two stab wounds for draining the pelvis, rubber tubes used here. Incision closed in layers, without drainage, stay sutures of silk worm gut, clips for skin.

Post-operative Treatment: High Fowler position—nothing by mouth—whiskey ʒ ss. per rectum, q. 4 h., one-half ampule of Pituitrin hypo, q. 4 h. Murphy drip 5% glucose.

First day: Treatment as above, patient vomited some. Temp. up to 101°, pulse 120.

Second day: Vomited about a pint of dark brown fluid, relieved after this. Cough. Treatment continued, plus three doses of morphin.

Third day: No vomiting, started on lime water by mouth ʒi q. i h. Temp. 103°, pulse 120, Resp. 40-45. Some cough. Bowels moved.

Fourth day: Allowed cracked ice and weak tea, small amounts. No vomiting. Retained 16 ounces during day.

Fifth day: Pituitin discontinued. Fast diet allowed. Murphy drip discontinued. Dressing: Clips removed, primary union. Temp. still between 100-101°.

Sixth day: Fast diet, no vomiting, condition good, whiskey discontinued. Still some temp. 100-101°.

Seventh day: Lungs examined—negative. Diet increased, fluids with eggs, toast and cereals.

Eighth day: Same diet, very comfortable, still bothered by cough.

Ninth day: Same diet, tubes shortened, moderate drainage.

Eleventh day: Soft diet, bed lowered.

Twelfth day: Patient got up a retention and had to be catheterized for the next four days. Then he was allowed out of bed and voided naturally.

Sixteenth day: Out of bed, voids standing. Light diet. Sod. Bicarb. gr. xxx T. i. d. Uneventful from here on to discharge. Stab wounds healed, primary union of incision. Discharged from hospital July 7th, recovered. Went to Convalescent Home for several weeks.

Second Admission to Hospital: Came back to hospital for observation on Sept. 7th. Had been under observation in the "out patient dept." and they sent him in with diagnosis of unhealed ulcer. He had had blood in stools persistently.

On Admission: Chief complaint. Distention of abdomen, belching of gas, pain in both shoulders, mostly in left. Since he left hospital he has been troubled with distention and occasionally pain in abdomen. Has gained weight, appetite good. Still has cough with expectoration, has had shortness of breath and edema of ankles.

Laboratory Findings: String test—no blood spots. Stools positive for occult blood, with patient on meat free diet.

Refuss Test Meal: Total acidity ranging between 52 and 73. Free Acid ranging between 36 and 58. Blood present in all specimens. No bile.

Discharged on the 15th day of September improved.

Perforated Gastric Ulcer. Patient.

Herman F. McChesney, M.D.

Dr. Raymond P. Sullivan, in opening the discussion, said:

"The doctor asks a question about the continuation of symptoms. It is my opinion that you still have an ulcer present. I understood you to say that you used linen sutures to go through the indurated gastric wall. I wish to emphasize the fact that non-absorbable sutures should not be used in an indurated gastric wall, or in any indurated area for that matter. Hence, the presumption of an ulcer is based on the fact that non-absorbable material is still present in the gastric wall and harboring an infection. An interesting point that struck me in this case was the fact that the primary incision healed up."

Q. "How long did you continue the stab wound drain?"

A. (By Dr. McChesney): "The man was out of bed on the sixteenth day and the stab wounds were not healed until that day."

(By Dr. Sullivan): "The ulcer is reported as an anterior wall perforating ulcer, pars media, and coming to operation within four hours after perforation. Is that right Doctor?"

A. "Yes about that."

"It has been pretty well established that in gastric ulcer perforations coming to operation within ten hours, that you have to deal with practically a sterile content. Just why this is so, I am not prepared to discuss at present. I think that the drainage in this case was down into the pelvis and that it proceeded along the paracolic grooves of the large bowel. The great omentum evidently covered the small bowel, thus protecting it. Hence, there was little more than chemical irritation to a large portion of the peritoneum. It has been my experience in cases of perforated gastric ulcer coming to operation as soon as this one, that if the peritoneal cavity is cleansed by a sucking apparatus or by careful mopping we may diminish the drainage to a considerable degree, and in many instances do none of it. I think this point has been demonstrated in this case, that is to say, while drains were used in both stab wounds, they were not low down according to the scar, and I feel that the pelvis took care of most of this exudate. If he had a peritoneal infection, it was of a low grade, and the peritoneum would probably have taken care of it itself. While if a suction apparatus had been used to carefully cleanse the peritoneal cavity, drainage might have been discarded entirely."

Dr. H. Beeckman Delatour, in discussion, said:

"I would like to emphasize the point brought out by Dr. Sullivan as to drainage in cases operated upon a very few hours after perforation. I think that if we thoroughly sponge out the abdomen or draw out the fluid with some suction apparatus we can close the abdominal wound with perfect safety and feel quite certain we are not going to get peritonitis. The superficial abdominal wound is more likely to become infected than the peritoneum and sometimes you will have the abdominal wound break down, but not extending into the peritoneal cavity."

Dr. Arthur H. Bogart, in discussion, said:

"I don't understand whether or not Dr. McChesney did a gastro-enterostomy in this case. At one time he said he did and in the beginning he said he did not."

Dr. Herman F. McChesney, in answer to the above question, said: "There was a posterior gastro-enterostomy done."

Dr. Herman F. McChesney, in closing the discussion, said:

"I want to add two things on the perforating case. One was the fact that the abdomen was thoroughly flushed out and that he did have more or less of a peritonitis. I left out his day-by-day report here. It showed that his temperature ranged up around 103 and the pulse 120. He had a good fight and came near passing out. He evidently had peritonitis if his temperature and pulse meant anything, as well as the distention, and we used those stab wounds to give him a thorough flushing after. We used a very large amount of saline there and ran in tube after tube until we got clear fluid, at the end of the sixteenth day. We used Pagenstecher in the turning in of the ulcer. It was a very indurated ulcer and I simply turned it in until it folded in and then ran the Pagenstecher through the peritoneal coat."

In answer to a question asked by one of the members of the Society as to whether any silk was used in the gastroenterostomy, Dr. McChesney replied that none was used.

Imperforate Anus.

H. F. McChesney, M. D.

Case No. II. Marie Lane, white, aged three days. Seven months, premature, weight four and one-half pounds.

Baby born on 23d day of August, 1916. Imperforate anus observed at that time, otherwise the baby was normal. Brought to hospital and operation performed on August 25th.

Operation: An elliptical incision within the margin of Sphincter and excision of a fibrous cord connecting perineum with blind rectum which was located one inch up. Sphincter dilated-rectum mobilized delivered and incised, ℥ i of meconium escaping. Rectum sutured to skin with interrupted chromic sutures. Time of operation, fifteen minutes. Ether anesthesia. Baby in hospital only twenty-four hours, removed to home. During stay in hospital, temperature ranged from 101-102-103°. Took feeding and had three bowel movements. Primary union except necrosis around one stitch.

Gall Bladder Case.

H. F. McChesney, M.D.

Case No. IV. A. B., forty-five years old, German, florist. Admitted to hospital Feb. 17, 1909, with following history.

Family History: Father died fifty-seven years, heart disease. Mother, seventy-eight years, alive and well. Brother, died thirty-eight years, cancer of liver. Sister, died fifty-seven, apoplexy. Two other sisters have had gall stones and had operation. No. T. B. in family.

Past History: Pneumonia at ten years. Always well since until present illness.

Habits: No whiskey, moderate beer drinker, some tea and coffee, one cigar a day.

Veneral: Denied.

Present History: One and one-half months ago started with loss of appetite, felt tired, indisposed to work, one month later had pains in arms, legs, back and shoulders, more in right than left shoulder, thought it was rheumatism. Slight pain in chest. Bowels regular until a few days before admission when he had frequent movements—fetid odor. Vomited just before admission, *Physical Examination:* Heart and lungs, negative.

Abdomen: Liver enlarged downward to a point just below the navel. Not enlarged upward, tender on palpation, no nodules on surface.

Skin: General jaundice, moist.

Operation: Cholecystostony. Before incision was made, a number of punctures made with exploring needle for pus; none found. Right upper rectus incision. After exposing liver, liver again explored with needle, no pus found; punctures bleed freely. Gall bladder, pancreas, stomach and kidney apparently normal. Gall bladder opened and drained—rubber tube. For two days following admission and before operation patient had chills and fever and jaundice was increasing.

Operated on February 20th. Following operation, temperature returned to normal, free drainage from the gall bladder. Jaundice gradually passed away, wound healed and patient discharged on March 23rd. Stay in hospital thirty-three days.

Laboratory Findings While in Hospital: Urine—bile present—otherwise negative. Blood: 16,000—76—Feb. 17, 16,800—78—Feb. 18, 10,800—86—Feb. 20. On August 12th, 1916, patient returned to hospital.

Present Illness: Thirty-six hours before admission patient was suddenly stricken with severe constant pain in and about region of old scar, no radiation of pain—no vomiting.

Physical Examination: Moderately nourished. Patient in intense pain, abdomen very rigid. Teeth poor, many missing. Tongue, heavily coated. Heart and lungs: Negative. Abdomen: Upper part rigid—particularly right side. Mass size of lemon palpable at lower end of old scar. Patient prepared for immediate operation.

Operation: Cholecyctectomy. Right upper rectus incision. Abdomen very tense. Liver and gall bladder completely walled off. Identified with great difficulty. Very low down. In freeing gall bladder it was opened and contents resembling fecal material escaped. This led to the belief that intestines had been opened by mistake. Opening closed with linen sutures. Gall bladder not adherent to liver. After it was entirely freed, cystic duct and artery ligated with chromic gut and bladder removed without opening peritoneal cavity; cigarette drain; abdomen closed in layers. On opening the gall-bladder, pus and one large stone (mulberry) found in contents. Patient made uneventful convalescence. Discharged on August 28th. Stay in hospital sixteen days. Recovered.

Gall-Bladder Case. Patient.

Herman F. McChesney, M.D.

Dr. Russell S. Fowler, in opening the discussion, said: "At the first operation was the common duct explored? I didn't quite get the description of the operation."

Dr. Herman F. McChesney, in discussion, said: "The common duct, gall-bladder and pancreas."

Dr. Russell S. Fowler, in discussion, said: "Then it wasn't opened, was it?"

Dr. Herman F. McChesney, in closing the discussion, said: "No, it wasn't opened."

Congenital Pyloric Stenosis.

H. F. McChesney, M.D.

M. O'R., two months old, 67 St. Edward Street. Patient sent into the hospital from the Out Patient Dept. History obtained from mother.

Family History: Mother, twenty-five years, alive and well. Has had two miscarriages. Father, thirty-three, alive and well.

Previous History: Normal delivery. Breast fed until present time. Q. 4 h. for twenty minutes. Boiled water occasionally, five feedings a day.

Present Illness: When one month old, baby started to vomit. Vomits immediately after nursing or before she finishes. Some feedings retained, but she usually vomits double the amount at next nursing. Bowels constipated, average once a day, small in amount, greenish or black in color. Patient placed on medical service on admission. Feed dram 3 q. i-h.; continued to vomit even after small amounts. Stomach contents: 5 c.c. of undigested food, tapioca given at 10 p. m. the night previous still present.

Exam. by Dr. Westbrook: Abdomen flat, except for marked tumor in upper abdomen at intervals, outlining contracting stomach characteristically.

Second Day in Hospital: Vomiting continues. X-ray taken (Bismuth).

Third Day in Hospital: Retained one feeding, vomiting, rest. Tried on milk of patient in maternity ward, but vomiting persists.

Fourth Day in Hospital: Operation performed. Hypodermoclysis given four hours before operation.

Operation: Posterior gastroenterostomy for congenital pyloric stenosis. Transverse incision, curved across abdomen (upper part) opposite external ends of ten ribs.

Findings: Pylorus was found to be like a spool and as hard as cartilage; tissue of jejunum was very thin and friable. Time of operation, fifty-two minutes. Ether anesthesia. Fine chromic for mucous membrane, linen for outside coats, abdomen closed in layers as usual, plain for peritoneum, chromic for fascia, clips and silk worm gut. Operation performed with clamps, two artery, clamps used. Hypodemoclysis given immediately after operation.

Post-operative Treatment: Feeding with own mother's milk q. 2 h. oz. II. Water oz. II q. 2 h. Murphy drip two hours on, two hours off. Saline with 4% glucose.

First Night: Vomited after each feeding and expelled drip.

First Day: Retained about six to eight ounces of saline and glucose by rectum, but vomited most of feedings and water. Bile and blood tinged fluid in vomitus. Stool with old blood. Temperature up to 104°.

Second Night: Continued to vomit feedings and water. Retained some drip.

Second Day: Feedings changed, mother's milk oz. ss q. 3 h. water oz. 33 q. 3 h. alternating. Drip discontinued, temperature 104°. Retaining some of feedings, but vomiting some of a. m. feedings. All p. m. feedings and water retained.

Third Night: Ol. Ricini oz. I. Hypodermoclysis 8 p. m. Retained all feedings, slept well. Hypodermoclysis 4 a. m.

Third Day: Feedings increased oz. I q. 3 h. water oz. I q. 3 h. all feedings retained . Whiskey m. 5 q. 3 h. in water. Temp. still 103-104°. Formula of milk 12 oz., water 20 oz., lactose oz. I 1/2 to replace mother's milk if necessary.

Fourth Day: Feedings increased. Oz. I ss of mother's milk or formula, water same amount, retaining all feedings. Temp. 101°.

Fifth Day: Retaining all feedings.

Sixth Day: Temp. normal, mother's milk or formula given, mother's milk t. i. d. formula rest of time, retains well, vomited once today. Skin clips removed, some purulent drainage on dressing. Vomited during night once, one hour after feeding.

Seventh Day: No vomiting, same feedings, still getting whiskey m. 5 q. 3. h.

Eighth Day: Vomited once 10 a. m. small amount, nurses well.

Ninth Day: Vomited large amount of greenish yellow fluid at 10 a. m. Retained all other feedings.

Tenth Day: No vomiting, feedings rather poorly taken.

Eleventh Day: Vomited after 3 p. m. feeding and once during night. Whiskey discontinued. Weight 9 lbs.

Twelfth Day: All feedings retained. Feedings increased to oz. II. q. 3 h. Mother's milk or formula. Weight 8 lbs. 15 oz.

Thirteenth Day: All feedings · retained. Increased to oz. V at each feeding.

From July 13th to day of discharge, Aug. 23d, patient vomited some every day or night. Wound healed.

Congenital Pyloric Stenosis. Patient.

Herman F. McChesney, M.D.

Dr. James C. Kennedy, in opening the discussion, said: "As a matter of information, I would like to ask Dr. McChesney what advantage he claims for the high transverse incision in this particular case, where this infant was so weak and where it was necessary to put in sutures through the rectus muscles to keep them from retracting, and whether time would not have been saved by a right rectus incision, getting the stomach and jejunum out rapidly, and whether he couldn't have done the operation in a shorter period of time."

Dr. Herman F. McChesney, in closing the discussion, said: "The transverse incision in this case was probably as much a routine as anything else. The Second Surgical Division have been using the transverse incision for all gall-bladder and stomach work, and we have been using it in practically all cases. I think it does take just a little bit longer, but not very much longer than the other, to close. About the only difference in the length of time would be the time consumed in putting the stay sutures in to keep the muscle from retracting. However, it gives you a very much better exposure in stomach and gall-bladder work. It is very much easier getting it out with an apparently small incision. It seems to open right up, while with the other it is difficult to retract it up where you want it. The whole rib cage lifts very readily in retraction with the transverse incision and you can do your inside work quicker even though it does take longer to do your outside incision. I appreciate the fact that I took quite a length of time on that particular case. The time of operation was fifty-two minutes."

Cholecystectomy. Indications and Technique.*

Russell S. Fowler, M.D., F.A.C.S.

Indications: Cholecystectomy is indicated in all diseases of the gall-bladder whether causing mild or severe symptoms. The operation is not done for the purpose of removing stones for these may or may not be present, but for the purpose of excising tissues diseased as the result of a progressive inflammation.

The author does not believe there is any such thing as innocent gall stones; these are always the product of inflammation. He believes that a gall bladder once infected is always infected and such a gall bladder may become at any time a source of real danger to the patient. For this reason he advises early operation to prevent the inevitable results of the progressive inflammation which affects the gall bladder. Done in the early stages the mortality has not been higher in the author's hands than that attendant upon operations for chronic appendicits, in fact he has lost no cases in which the disease was limited to the gall bladder.

At operation there are certain types of gall bladder disease which can only be recognized by one having extensive experience in this department of surgery. At operation it is not sufficient to remove the gall bladder; exploration of the ducts is imperative. A common duct once infected always presents the possibility of further stone formation. Enlargement of the gland in relation to the cystic duct, enlarged glands at the base of the liver and enlarged glands along the common duct itself including those glands in the pancreas at the termination of the common duct in the duodenal wall, all these, either separately or together are of value in determining the presence of inflammation in the gall bladder even when the external appearance of the viscus is apparently normal. If the gall bladder is tense it is inadvisable to try to express the contents by pressure through the cystic duct. Aspiration should be done and many times will show a thickened gall bladder wall which it was impossible to discover by palpation in the distended state of the gall bladder. The reason for considering gall bladder disease as a progressive inflammation is treated of in another communication.

Technique: Cholecystectomy should be just as formal an operation as hysterectomy or thyroidectomy. The technique here described has been employed by the writer for a number of years and in a sufficient number of cases to be able to vouch for its adequacy. No originality is claimed. The method is the logical result of the practical study of the anatomical and pathological changes present in gall bladder disease.

Here followed a lantern slide demonstration of the author's technique.

Paper: "Indications for Cholecystectomy and Technique of Operation."

Illustrated by Lantern Slides.

Russell S. Fowler, M.D.

Dr. Thomas B. Spence, in opening the discussion, said: 'I am sure that we are all grateful to Dr. Fowler for depicting to us his methods of dealing with the gall-bladder, and I desire to take this opportunity to compliment him upon the very beautiful pictures which he has just shown us. I think very few of us will quarrel much with the doctor as to the methods which he employs in the technique of cholecystectomy. All of us probably follow details a little differently in some particulars. I imagine that in the main most of us follow out the lines which he has indicated.

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* Abstract of a paper with lantern slide demonstration read before the Brooklyn Surgical Society, Oct. 5, 1916.

"The first part of his paper, I am sure, might be very well open to discussion from various points of view. We might or might not agree with him in every particular. The operation of cholecystectomy, I think, will have to be acknowledged by all of us as being a little more difficult than the opening and draining of a gall-bladder. The details are such that they must be learned by a man who has already acquired more or less of a technique in abdominal surgery. None of us, I am sure, would recommend to a beginner in surgery that he should make it a routine to remove all inflamed gall-bladders. He would have more successful cases, I am sure, with the lesser operation than with what might be considered a more complete and finished technique. There is still a difference of opinion among the very best surgeons as to whether every diseased gall-bladder should be removed or not. I think there are some arguments on both sides, and I believe almost all surgeons are doing cholecystectomy much more frequently than they did a few years ago, but to come back to my first contention, one reason they are more satisfied with the operation is that they have learned to do it, and it cannot be learned in a day's time."

Dr. Arthur H. Bogart, in discussion, said: "It may be all right and perfectly proper for Dr. Fowler to take out the gall-bladder in every case of gall-bladder operation, which he does. It wouldn't be proper for me to take out the gall-bladder in every gall-bladder case that I do. Nor do I believe it would be proper for any of us, except perhaps Dr. Fowler, to take any such stand as that. It's a fact that cholecystectomy is being recommended and it is also a fact that recently (within the last year) we have heard some of the best men saying that they are a little doubtful about it.

The average case of gall-bladder disease that comes to my hands is the acute gall-bladder, and they occur in women. Most of them are fat women. Some of them are brought in on the ambulance. I think that probably they have had a good meal or something like that before they come in. Some of them aren't good surgical risks and in some of them that I have attempted to operate the gall-bladder was attached to the spine or pelvis, so it seemed, and at the same time these patients don't always take an anesthetic well."

At this point in his remarks Dr. Bogart said that he has at times found himself in a predicament of not knowing whether it was the more advisable to take the gall-bladder out or leave it in. Continuing, he said: "I am quite sure that were I to attempt to take the gall-bladder out in every case I operated on I would have a good deal higher mortality than I have now, and I am quite satisfied with my mortality as it is. It is true some of my cases come back. However, the most of them get well and that, no doubt, is the principal thing.

"I think that in deciding these questions you have to take the care of the patient into consideration, and I also think it is a pretty good thing to take the surgeon into consideration. If things are all right and look favorable and it is a diseased gall-bladder which you know ought to come out, it is better to take it out if it doesn't look difficult. Otherwise, it seems to me it is better to let it alone. It is a fact that in the cases where I have removed the gall-bladder the patients have a little more stormy convalescence than cases in which I simply do a drainage operation, so I think we should be a little careful about taking the gall-bladder out."

Dr. Henry F. Graham, in discussion, said: "My personal experience hasn't been very great in this line of surgery. I have seen a little of it, of course. I think, perhaps, I will confine myself to telling of an experience that I had this summer. About three days before I was to go on my vacation I had a patient sent to me with an acute gall-bladder condition. I took him up into the operating room and started in. I found he had a very narrow chest, with a sharp costal angle, so that I hardly had any room to work in. Then it seemed to me that he was about a foot and a half from front to back. I had never seen such a condition as that before. However, I succeeded in getting inside. First I thought I would do a drainage operation (and I got all ready to do it) and drain the gall-bladder and put a tube in, when, much to my disgust, to put it frankly, I found that the entire mucosa was gangrenous. I didn't feel that it would be quite the fair thing to that man to leave the gall-bladder in, even though I will confess that I didn't want to try to take it out. After hemming and hawing a little bit I started in, but could not get a good view of the thing to outline the points in the way Dr. Fowler has mentioned. In fact, I think I would have had to put my head down into the wound in order to see it. In the end I used two clamps and felt along. The stone was located way down in the cystic duct, pretty close to the common duct. I got a right-angled clamp below it. After putting it on two or three times and taking it off and putting it on again I could tell that I was below the stone and put another clamp on above. And then I started to get the cystic artery and got a clamp on in that region, and I tried to remove the gall-bladder in the reverse direction, but that didn't seem to work very well, so I had to start in at the fundus and work down. I got it out and tried to get a ligature on instead of draining the ducts. The disease seemed to be mostly in the region of the gall-bladder itself. I don't think I could have located the common duct in that particular case. I tried to put ligatures on the cystic artery and duct but they cut through the edematous tissues. The hole was so big and the chest so thick that I couldn't see very well and I decided that discretion was the better part of valor, so I put a tube in with some gauze down there to keep back the blood that was getting in and I got out. Having planned, as I have already said, to go on a vacation in a couple of days, I left the case for others to attend to as I thought he would be in good hands. I kept him from fluid during the first twenty-four hours because I was afraid of starting up a lot of bile from the cystic duct and perhaps start bleeding from the cystic artery. At the end of twenty-four hours the pulse went up and he was not in very good shape. I started some fluid by rectum and allowed him some water by mouth and from then on he made a smooth recovery. I went away on vacation and, to be frank, I didn't write to find out how he was coming on because I was afraid of what might have happened to him. I wanted to write, but didn't. However, when I got back on inquiring about the case, I found, much to my surprise and great pleasure, that he had made an uneventful recovery. Personally, I don't think I would care to take out every gall-bladder if I could avoid it."

Dr. H. Beeckman Delatour, in discussion, said: "I am one of those who are not in favor of the indiscriminate and general removal of the gall-bladder. If we were to follow the directions laid down by Dr. Fowler tonight, I am afraid that we would be removing the gall-bladder in the majority of patients whose abdomens we open, and we would be removing the gall-bladder sometimes unnecessarily as the ovary was removed in the early days of ovariotomy, and I think no one questions today the fact that a great deal of mutilation that was really unnecessary and did harm rather than good was done in those cases.

As to the fear of carcinoma following inflammations of the gall-bladder and stone in the gall-bladder, as Dr. Murphy has just pointed out—that is rather overdrawn. If we were to go by statistics, which give the percentage of people in advanced life who have gall-stones that have never been recognized as being greater than those that are recognized, we would see many more cases of carcinoma of the liver and gall-bladder than we do. I am sure the Society would note that easily from the large number of cases which we have in the hospitals of Brooklyn throughout the year. A very small proportion of cases suffer from carcinoma in this region, and then it is usually carcinoma starting from the stomach. Even in those cases of severe inflammatory lesions of the gall-bladder going on to a gangrenous condition, such as described by Dr. Graham, I have left the gall-bladder in place and instituted drainage in a number of cases, one of them done only this last Sunday, and I have followed three of those cases over a period of a number of years and there has been no recurrence of the trouble. I believe that it is much safer in cases where you have such tissues to deal with, to leave the gall-bladder in and institute sufficient drainage than it is to remove the gall-bladder and get into the difficulty of not being able to get your ligatures to hold on the vessels and ducts. In cases of gall-bladder surgery where there is an inflammatory condition of the gall-bladder itself, we should continue our drainage for a longer period than is generally the custom. It is quite the proper caper to get your patients healed up and out of the hospital as soon as you possibly can. That always is not the best for the patient and in this class of cases I think it is especially so; we should persist in our drainage for a longer period than we would in the ordinary case. As soon as the drainage tube drops out to leave it out and close the wound as quickly as possible, sometimes leaves behind infection and in these cases it is not only the gall-bladder that is infected; the common duct and the hepatic ducts are pretty generally infected. If you remove the gall-bladder in these you only remove one source of trouble and prevent any further treat ment of the infected ducts. In the discussion of a paper written by Dr. Mixer, which was read before the American Surgical Association, in which Dr. Mixer advocated cholecystectomy as strongly as Dr. Fowler has here tonight, Dr. Crile cited several cases in which it was shown that the removal of the gall-bladder was followed by a persistence of the symptoms and the difficulty was not relieved, and, secondary operation was very difficult. In two or three cases which he cited where the stump of the cystic duct was left, it was dilated and a stone found and it was very difficult to get at it. Personally, I am following the practice of removing the gall-bladder in a certain few cases that I feel it is necessary, but, in the majority of cases, I am content with cholecystostomy."

Dr. Joseph P. Murphy, in discussion, said: It has been my misfortune to have had five cases that I had operated for gall-bladder condition, come back this year, for further operative procedure. In these cases I had done cholecystostomy. That is, I had drained the gall-bladder.

Naturally, I was very much interested in Dr. Fowler's paper, and I came here tonight purposely to hear it, and received much profit and pleasure.

In August last, in the Journal of the American Medical Association, a very fine paper written by Donald Guthrie was published under the title "Indications for Cholecystectomy." In it was given a very good resumé of the subject. He cites that he wrote to forty-five prominent surgeons on the subject of cholecystostomy versus cholecystectomy, with the end results. And he sums up by stating that nine and one-half per cent of the cases in which they did a cholecystostomy, the cases afterwards returned for cholecystectomy. In this paper he cites a report of the Mayos at St. Mary's Hospital, Rochester, as having had in 1907, 100 cases of cholecystectomy and 261 cases of cholecystostomy; but in 1915 their figures were given as 915 cholecystectomy and 60 cases of cholecystostomy.

On the frequency of gall-stones Brewer cites in his text-book, "that Reidell and Kehr found at autopsy that ten per cent of adults had gall-stones." Thus, I presume, that those gall-stones worked quiescent and gave no trouble to the people that had them during their lifetime.

In the anatomy of the gall-bladder, as is described in the old text-books, the "common duct descends along the right border of the lesser omentum behind the duodenum, passing between the pancreas and the descending duodenum, before its termination," just as it is shown in the screen picture of Dr. Fowler. Whereas, in a large percentage of cases it is covered by or included in the head of the pancreas for a short distance before its termination in the bowels.

In essential gall-bladder disease, those in which the gall-bladder itself is involved, naturally the duct is involved, and secondarily the adjacent structures; that means the pancreas. In many of these cases of gall-bladder disturbance that come to operation, you will frequently find the pancreas not only microscopically, but macroscopically involved; and according to many surgeons, pancreatitis is most often secondary to inflammation involving the gall-bladder. What is one to do in such cases? I would like definite information. I have used my best judgment, and drained the gall-bladder under these conditions and obtained most satisfactory results. Could I have obtained better results by doing cholecystectomy in these cases? Or could I get resolution in the pancreas without the drainage of the gall-bladder? It is impossible to state whether these cases will come back afterwards for further surgical measures, but at all events, they always obtained a certain amount of relief, if only temporary.

Again, the percentage of carcinoma. The pathologists tell us that the percentage of essential carcinoma of the gall-bladder, is exceedingly rare. So it is not fair to reason from the minor to the major premise and use that as an argument for the ablation of the gall-bladder.

Dr. Raymond P. Sullivan, in discussion, said: "Cholecystostomy, in my opinion, has a definite place in the surgery of the gall-bladder. It is indicated when temporary drainage of the gall-bladder and bile passages is required, as in acute suppurative conditions complicated by adjacent peritonitis. It is, no doubt, a simpler operation than cholecystectomy. The latter operation, in my opinion, is never indicated in the presence of an active peritonitis, because, I feel we are not justified, under these conditions, to interfere with the cofferdam adhesions and thus predispose to a spread of the peritonitis. I agree also that in very fat patients where the position of the liver and gall-bladder will be such as to cause a good deal of difficulty in getting at the gall bladder cholecystostomy will permit of the mechanical removal of stones and that drainage thereafter will frequently give considerable relief. However, to my mind, the important point in this whole question is an early recognition of the pathological conditions present. Does the infection primarily exist within the gall-bladder and ducts as a mucous infection or is it most frequently an interstitial condition? I recall a case of gall stones where culture of the bile after the removal of stones was negative and yet secondary cholecystectomy was necessary to give relief. The explanation in this instance is not difficult. It shows that the infection was in the gall-bladder wall and that simple drainage was of little assistance in the cure of the disease. There was a temporary symptomatic relief but later evidences of stomach disturbance led to the diagnosis of chronic cholecystitis and the removal of the gall-bladder was followed by a satisfactory cure. The point I wish to emphasize is that most frequently we will have to deal with subacute or chronic infection of the gall-bladder wall and that failure to remove the source of infection is an unwise position to assume. Consider the strawberry gall-bladder. We know that the pathological condition present is due to a submucous infection and that drainage will not cure the condition. We likewise know that over 90% of carcinoma of the gall-bladder has been found where stones are present. I, therefore, consider that we should practice removal of the gall-bladder in the majority of cases of chronic or subacute cholecystitis with or without stones. I feel that in doing this we will remove a focus of infection and that drainage in such instances, if practiced, will not effect a cure."

DR. ARTHUR C. HOLZMAN, in discussion, said: "I probably have had very little experience in removing the gall-bladder, but perhaps the members here present will feel a little bit relieved by knowing something of its pathology. I have had extensive opportunity of sectioning the gall-bladder, and I know for a fact that most of the gall-bladders which I have had occasion to examine show extensive changes, not only in the mucosa, but also in the underlying tissues. I know in these cases, especially those that Dr. Fowler has removed, there are extensive pathological changes, not only in the mucosa, but also in the submucous layer and in the muscular layer as well. I heartily agree with Dr. Sullivan in saying that when you leave in or when you drain a gall-bladder which is chronically infected you are leaving in an infected area. There is no question about it because when you take the gall-bladder out and section it you can see the damage that one organism or others, growing in symbrosis have done in the way of the changes it has left behind. I think the time when we can benefit the patient is at the time of operation, and I personally feel that a subsequent operation is entirely unnecessary."

DR. JAMES M. DOWNEY, in discussion, said: "I don't think that it is fair to take the statistics of the Mayo Clinic or any other clinic, for that matter, for the purposes of comparison, for those cases are subacute or chronic cases. As we get them in the hospital a great many of our cases are acute cases with considerable inflammatory exudate.

"I have followed a rule which has been very satisfactory to me and it is this: in acute conditions with high temperature and high leukocytosis and considerable toxemia, I think, it is wise to drain the gall-bladder especially if it is difficult to remove it or the patient is very stout and has considerable abdominal fat. The first thing you want to do is to get the patient well and if necessary, you can do a cholecystectomy afterwards as you will have a better opportunity to do it more successfully. To take the statistics of any clinic where the cases are generally of the subacute or chronic type and put them forth as a criterion for cases as we get them in the city, does not do justice to the operation or the paper either."

DR. RUSSELL S. FOWLER, in closing the discussion, said: "I am glad that the members of the Society enjoyed the pictures which I have shown. I know I have enjoyed the discussion very much. I don't think that there is anything which I can add on two points—Indication and Technique—outside of what I have said in the paper, but I might state that a gall-bladder operation, even where the gall-bladder is inflamed, is not necessarily a difficult operation. It may be made difficult by not placing the patient in the proper position, by not having proper anesthesia, by not having proper assistants and by an operator inexperienced in this field of work. Fifty per cent of the success of a gall-bladder operation depends on the position of the patient, forty per cent depends on the anesthesia, nine per cent depends on the assistants, and one per cent depends on the operator."

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CADWALLADER COLDEN. 1688-1776.

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IT is permitted us, now and then, to glance through the gaps in the hedge that confines us to the beaten path of medical literature into the broad highway of general history and to see here and there physicians who have cast their lot with the busy stream that throngs that restless thoroughfare; men who, through chance or opportunity, have helped to shape events and have left a lasting impress upon the record of the times in which they lived. Of these Cadwallader Colden is a conspicuous example. His eighty-six years of life covers a long period in the growth of Colonial New York, and his activities are closely interwoven with the events that began with the French and Indian Wars and ended with the beginning of American Independence.

Born at Dunse in Scotland in 1688, he was intended for the ministry, but he chose medicine instead and studied at Edinburg, graduating in Arts at seventeen and receiving his Doctor's Degree three years later. With this excellent foundation rounded out by post-graduate study in London, he came to Philadelphia, to the house of his aunt, in 1710, where he practiced for five years. Returning to London he took part in the events of that stirring year so sacred to loyal Scotsmen—"the fifteen"—then married and returned to America and settled in New York in 1718. From that time he become so thoroughly identified with the political life of the colony that his medical activities are of minor interest except as they helped to contribute to the pursuit of his scientific studies; nor is there much to show that he ever practiced.

The occasion which called Colden to New York was an invitation from Governor Hunter, who seems to have recognized in him traits of character to his liking, to become Master in Chancery and Surveyor-General of the colony. He had before this achieved some distinction by the publication of a paper on Animal Secretion which had been presented for him before the Royal Society and had excited more than usual interest. It is more than likely that Colden saw in this appointment the opportunity to free himself from the arduous uncertainties of medical practice while assured of an income and a standing in the community, with unusual opportunities to gratify his longing for scientific observation and study; a dream that proved as elusive to him as to many another man who had assumed the yoke of public duty;

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* Note: Read before the Brooklyn Medical Historical Society at its First meeting.

for Colden learned, as others are learning now, that the conscientious performance of the duties of his office demanded not only greater effort and profounder sacrifice than he had anticipated, but also aroused the antagonism of the professional grafters whom he was compelled to oppose and the bitter and out-spoken condemnation of the entire colony. Not only did he have little time for his scientific studies, but often his pay was inadequate too, or dependent upon the caprice of the Royal Governor, or of a Legislature from which even our modern one at Albany could learn much of practical politics. In the fifty-eight years of his public service, Colden never learned how to get on comfortably in the political life which he had taken up, partly from choice and partly from a sense of duty. His historians courteously described his Scotch pig-headedness as natural firmness, but apparently he could not put himself in the attitude of seeing both sides of a question and over and over again was plunged into heart-breaking conflicts that could have been avoided by a little tact on his part and a willingness to concede something to the other man's point of view. If his letters and the unusually complete record of his public service are properly interpreted, it would seem that Colden showed a sterling honesty in his administration of the function of Surveyor-General and an intense loyalty to the Royal Government that placed him immediately in opposition to two classes. The first of these were the landgrabbers; a hoard of placemen and favorites who fawned upon the Ministers for the Colonies or the Royal Governor, or other influential folk, in the hope of receiving grants of land in Great Britain's American possessions. The great landed proprietors who held over from the time of the Dutch possession, such as Van Rensslaer, and somewhat later proprietors as Livingston, Schuyler, Philipse, and others, were constantly scheming to increase their already enormous holdings and because of the need for political influence were earnest in their efforts to be represented, either personally or by their creatures, in the Legislature. Added to these was the constant stream of fresh arrivals looking for desirable tracts and careless as to the means by which they obtained them. Each Governor in succession was more than likely to become a silent partner in every demand for grants of land and the post of Surveyor-General could have been made the source of enormous ilicit profit had Colden so desired. There were other factors that made his administration hard. The adjoining colonies of Connecticut, Massachusetts and New Hampshire disputed vigorously with New York for the possession of that broad strip of territory lying between the Connecticut and the Hudson; some trifling ambiguity in the Charter offered a pretense for Connecticut to claim jurisdiction practically as far as the Hudson above New York, while the Governor of New Hampshire boldly granted patents to that considerable area that evidently belonged to New York and now constitutes the entire state of Vermont. That Colden was repeatedly chosen to act as a commissioner in settling these disputes (and once upon the request of an active enemy), is evidence of the fact that, however much his obtrusive honesty irritated his contemporaries, they nevertheless recognized that he was impeccable. The second influence that he was forced to combat was the Legislature, partly on account of its intrinsic rottenness and partly because its growing restiveness under the vacillating misrule of the English King and Parliament antagonized Colden's unquestioning loyalty at every fresh manifestation.

His frequent memorials to the Board of Trade and to the Ministers show that he fully realized from the beginning of his public service how irritating to the colonists the ill-considered policy of mingled neglect and repression was, and that he foresaw the result, though his personal traits prevented him from exercising the judicious use of the power which he held when he became Chief of the Council and, later, Lieutenant Governor. He might have become the acknowledged leader of his colony and guided it into paths that would have established New York at least on the same foundation as modern Australia. But he was at heart such a loyalist that he opposed the strictest interpretation of the Government's mandates to the will of the Colonists, and thereby fanned their resentment instead of assuaging it. Apparently he was unable to rise above personal dislikes and opposed a dogged determination to every effort to thwart his administration. James Delancey, the acknowledged leader of the opposition, brilliant, resourceful, shrewd and a bit unscrupulous, he converted into an active and powerful enemy; while he bored the British Ministry, who should have held up his hands, by his long recitals of their duty to the colony and his strictures upon his opponents. Delancey thoroughly understood him and by his political acumen was able to array against him one legislature after another. More than once he was driven from the active duties of his office, on one occasion for seven years, during which he retired to his estate of Coldenham where he applied himself to the study of botany, physics, and the composition of a history of the Indians of New York. But Governor Clinton needed his moral support and eventually we find him again in the midst of politics. He combined the offices of Surveyor General, Chancellor and Chief of Council until 1761, when he was appointed Lieutenant Governor. The duties of the Surveyor General carried him in person over the greater part of the present state of New York, Vermont, and Western Massachusetts and Connecticut and brought him into close relations with the Indians who seemed to have grown to regard him as their staunch and dependable friend. Indeed he was formally adopted into the Canajoharie tribe. They had reason to respect him, for he seems to have been the only influence, if we except Sir W. Johnson, that stood for fair play in the land transactions between them and the Crown. Although the Crown claimed sovereignty over the entire territory, it had agreed by treaty to purchase such land as it choose to grant to settlers from the Indians who occupied it. But it granted patents that were so loosely drawn that influential patentees laid claim to tracts that in some cases ran into the hundreds of thousands of acres, bounded by rivers and landmarks that existed only in the imagination. Colden's surveys were the only trustworthy guide, and his maps the only guarantee that stood between them and lawless spoliation and they soon learned that he could be depended upon to uphold such rights as were left to them. The records of the time are eloquent of the unprincipled attempts to obtain enormous tracts in desirable localities and Colden's personal correspondence is filled with importunities from all quarters for favors in pointing out desirable tracts and suggestions of profit to himself if his influence could be secured in obtaining the desires of "Yr. Humble and Obedient Servant, So and So." He had himself early obtained a grant of three thousand acres lying about the junction of Orange and Ulster Counties not far from Newburgh where he hewed out an Estate to which he retired whenever he could and which was more his house than New York. It was here that he indulged his fondness for scientific study and here he wrote his History of the Five Nations of New York, an account of the New York Indians that achieved a wide popularity in England, though it is singularly lacking in the qualities that would have made it of enduring value, for it gives little of the tribal customs and manners and deals with the dry facts of history. However, it served to bring Colden into very general notice both at home and abroad.

He had always taken a keen interest in botany, and spent much time in collecting and describing the plants in the woods and clearings about Coldenham, a pursuit in which one of his daughters soon learned to take a lively interest. Somewhere about 1740 he obtained a volume of Linneus. Its system and method appealed to him and he at once began classifying the plants to which he had access. These he forwarded to Linneus and a delightful correspondence sprang up. Miss Alice M. Keyes records "There were other things more pleasant still. Thus, 'Acta Upsalentia' for 1743 contains—Plantae Coldenghamiae in Provincia Novo Eboraceni spontanae Crescentes quae ad me methodum Linnaei Sexulem Observavit Caldwallader Colden: Linneus named a newly discovered genus of plants Coldenia; Colden's acquaintance was sought by well known botanists; and the inevitable request for the story of his life, for publication in a 'Biographica Botanicorum,' arrived promptly."

During this period there was an evident awakening of interest throughout the colonies in regard to cancer cures. The embryonic condition of medical thought precluded any but clinical notions and deductions, with empiricism running rampant. Francis H. Brown reproduces a secret cancer cure from the receipt book of John Wadsworth, of Duxbury, somewhere before 1700 that casts a brilliant light on the status of medical practice. I quote it from Mumford:

"This receipt cost me fifty pounds by count and I pray yt you would not expose the same without good fee; this for a canser proves exelant, and if in time applied will cure a canser humor. Tak three Frogs and put ym into a deep airthen Basen and power upon them as much sweet oyel as will cover them, put ym into a hot oven and let ym stand a quarter of an houre; then turn off the remaining oyel and dip tow in it and apply to the canser; and for a plaster you must take the yolks of 2 eggs, Burnt Allow. 1 oz. Boal armonick, 1 oz., Bay salt one-half oz. Bruse all to a fine powder and mix up with yr yolks of eggs and apply in form of a plaster to the sore every 3rd day. Give a portion of a spoon of salts to cool the hete of the Blood; this always will carry off a canser humor if timely applied: The person must make them constant Drink canser roots tea. * * * We may at sartain times apply a tode cutt in two to the wound two or three times a week the nature of yr tode is such it will draw out the sharp hot canserous and pysonous and if you proseded in this matter you may cure any canser." One hundred and twenty-five years earlier Ambrose Paré learned from a Florentine surgeon a sovereign balm for gunshot wounds made by boiling tender young puppies in oil of Lilies of the Valley, but it would seem that the stern New Englander set his face against such luxuries and preferred to mortify the flesh with reptiles.

As evidence of medical progress it is cheering to find that Colden sought to prove the healing power of tar water and of the great water dock, which he thought might be efficacious in the treatment of cancer, and devoted a considerable pamphlet to his studies on it, botanical and therapeutic. It may be interesting to record that poke berry salve, a related substance, is still esteemed in some country sections as a healing application for cancer. (Personal experience.) Of more practical interest, however, is his account of an epidemic of fever—probably yellow fever—that visited New York in 1741-1742. We do no injustice to the present Imperial Borough of Manhattan if we acknowledge that in those days, although report has it that her houses stood in trim gardens and the whole town blossomed like a nosegay, the modern definition of Manhattan as an island almost entirely surrounded by sewage was not yet justified. The disposal of sewage and other sanitary problems was left much to the discretion of each resident. There were some sanitary regulations, but no regulator. Colden believed in the contagiousness of the fever and that it bred in the holds of the ships and in standing water in cesspools and cellars. He had the courage and the influence to enforce his convictions and the city fathers were persuaded to furbish up the old sanitary code and the town was drained and cleaned. It has lasped more than once since, but never to the pre-Colden state. Benjamin Rush tried to emulate him during the yellow fever epidemic in Philadelphia 60 years later and the worthy merchants broke into indignant clamor because he had villified their city!

Twenty-eight years later we find Colden's name associated with another important achievement. Dr. Samuel Bard, fired by the success of the Medical School of the University of Pennsylvania, and impressed with the crying need for better medical education, had at last succeeded in gathering the elements for a medical college in New York. Colden, as Lieutenant Governor in 1768, signed the Charter of the Medical School of Kings College. Its history was fitful and at times, especially during the Revolutionary War, it was temporarily suspended; but it was the early shoot from which the College of Physicians and Surgeons blossomed, while King's College became Columbia University. Two years later, 1770, Colden chartered the New York Hospital.

In 1753 he published an article on exidemical sore throat. This had made its first appearance at Kingston, Mass., in 1735 and spread over the Northern Colonies. Douglas of Boston had described it many years before, however. It was doubtless malignant diphtheria. No account of Colden's times should omit his remarks on the "Climate and Diseases of New York," one of his earliest publications. Barring the frequent and severe thunderstorms of the summer months, Colden spoke of the climate in glowing terms; he even compared it to the Riviera, and foresaw a stream of consumptives making it their Mecca. He adds, "The air of the country being almost always clear, and the Spring strong, we have few consumptives, or diseases of the lungs. People inclined to be consumptive in England are often perfectly cured by our fine air, but if there be ulcers formed, they die in a little time. * * * The climate grows every day better as the country is cleared of the woods; and more healthy, as all the people who have long lived here testify. * * * I therefore doubt not that it will in time become one of the most agreeable and healthy climates on the face of the earth. As it is at present, I prefere it to the climate of England, and I believe most people that have lived any considerable time here, and returned to England, will confirm this."

Curiously enough, although circumstances so ruled that he is best known as a publicist, and his greatest services to his contemporaries were his accomplishments in adjusting the tangled boundaries due to the indiscriminate land grants, his fight for the rights of the small landowners and his long struggle to institute just and equable taxes on land—quit-rents they were called then—he himself believed that his studies and writing on physics would be the enduring basis for his fame. Deeply impressed by Sir Isaac Newton's writings on gravitation, he believed that his own deductions from Newton's premises offered the true explanation of the laws of attraction and published a treatise on the subject entitled the "Principles of Action in Matter." In his letters to Franklin, with whom he enjoyed a warm and sympathetic friendship, he urges the reasonableness of his theorem, but it would seem that even that profound thinker did not fully subscribe to Colden's reasoning and the treatise eventually passed from view, although the first edition was extensively read and was said to have exerted considerable influence upon several contemporary books on physics. He later expanded and extended his ideas, but the papers containing them were never published, and no copy remains.

His intimacy with Franklin led to the suggestion of the American Philosophical Society of which he has been the accredited founder, though it is more likely that Franklin and not he was the actual prime mover in its organization. It is interesting to know that his views on education were far in advance of his time in that he favored technical education for women and a far broader training in modern subjects for men.

The closing years of his life saw the beginnings of the Revolution. Although only Lieutenant Governor, the actual administration of the colony devolved upon him for almost the entire period during the Stamp Act excitement and until the actual outbreak of the war. He stoutly upheld the effort of the Government to force the stamps on New York, braved the fury of the mobs that demanded their destruction and then had the mortification of seeing the Royal Governor reverse his action. His figure was burned in effigy and the mob burned his carriages before his face. But only a few months later, public opinion turned to him, as the more conservative element began to realize the serious trend toward rebellion, and his advice was sought and followed in the choice of delegates to the Congress at Philadelphia. He died in 1776, just at the outbreak of the war.

These scattered gleanings from a long life of industry and accomplishment gathered without thought of orderly sequence or relative importance and with no pretense to original research, may help to awaken interest in a period that offers fascinating opportunities for historical study, and in the life of a man who fell just short of real greatness, but who nevertheless deserves to be classed among the most devoted servants of a community that he helped to raise to a dominating position in civilization.

THE CARE OF THE HEART IN PREGNANCY.*

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Brooklyn-New York.

THE subject for discussion tonight brings up the question as to who is the better qualified to care for the pregnant woman—the obstetrician or the internist. So far as the treatment of cardiac complications is concerned, I think it is evident that the obstetrician must frequently feel the need of turning to the internist for help, and that the internist who tries to settle all difficulties without expert obstetrical advice will often come to grief. If the responsibility had to be left with one man, it seems to me that the safest adviser would be a general practitioner of sound judgment, who had not only confined many women and treated many hearts, but who was thoroughly familiar with the patient herself and knew from long observation how much strain the woman's heart could be depended upon to bear. During the confinement itself, no doubt the specialist would be preferable. Hard and fast rules for guidance would perhaps nowhere find more exceptions than in the subject under discussion. Each case has to be considered strictly on its own merits.

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* Read before the Brooklyn Society for Internal Medicine, Nov. 24, 1916.

The question as to what happens to the normal heart in a normal pregnancy is still under discussion. It is almost the rule to find an enlarged area of cardiac dullness as pregnancy progresses, and systolic murmurs, most typically at the base but also at the apex, are frequently heard. These physical signs are interpreted by one school as being due merely to a crowding up of the heart by the enlarging abdomen. Others contend that a hypertrophy takes place, and Williams quotes Dreysel to the effect that the hearts of seventy-six pregnant and puerperal women weighed 8.8% more than the hearts of normal women. The fact that these women came to autopsy would seem to indicate that they could not be considered normal pregnancies. However, there is considerable evidence that the heart has more work to do during pregnancy than during the non-pregnant state. Whether or not it responds by hypertrophy, the fact remains that weak hearts frequently give way to the strain in more or less degree. With or without local cardiac signs, there may occur such symptoms as dyspnoea, an undue degree of dependent oedema, or merely a sense of fatigue that are not attributable to toxemia, and that respond to measures directed to the circulation. Digitalis, strophanthus, and similar drugs relieve such patients, and of course from a practical standpoint, more important than any drug is sufficient rest. It may be necessary to put the patient to bed, or mere curtailment of her exertions may be sufficient.

In the management of chronic heart trouble, more serious problems arise. In the first place, should a woman suffering from chronic heart trouble be allowed to become pregnant? Take for example what is usually considered the most serious valvular disease from an obstetrical standpoint—mitral stenosis. Here no general rule can be laid down, but there are certain principles which may be borne in mind. If the disease is of recent acquirement, the heart having been damaged for less than two years, the future behavior of that heart is still a matter of uncertainty, and it would be the part of wisdom to advise the woman not to allow herself to become pregnant until it was shown that the heart muscle could fully compensate for the valvular defect. With a long standing mitral stenosis, if the patient has never suffered from broken compensation, and there are present no obstetrical contraindications (here the opinion of the expert obstetrician is clearly needed), the patient may be told that she runs but little added risk from her heart trouble, provided that she keep in constant touch with her adviser, and follows directions implicitly. She should be told that if during pregnancy there should occur the faintest sign of decompensation, it would demand immediate attention, that she might have to go to bed and perhaps stay there a long time, but that with such precautions there would be but slight danger to herself, and a very fair chance of a healthy baby, in the hands of a skilled obstetrician. Then the decision may be left with the patient.

A patient with mitral stenosis, who has previously had such symptoms as shortness of breath or dropsy should, as a rule, not be allowed to become pregnant.

For the less serious cardiac lesions the same advice would be applicable. The involvement of more than one valve, or the presence of adhesive pericarditis would contraindicate pregnancy, whether or not the patient had ever suffered a break in compensation.

If pregnancy has already begun when the heart patient seeks advice, the problem is complicated by a consideration for the life of the child. Here again one must individualize, and depend largely upon the past history as well as upon the present condition. The various heart lesions may as well be grouped together in this consideration, for it is the functional capacity of the heart, rather than any anatomical peculiarities, that is of importance.

If the pregnant woman has had repeated attacks of badly broken compensation, and her organs are all in a condition of chronic passive congestion, the chances are that she will abort in any event, and I do not believe that it is worth while to subject her to the very grave danger of advancing pregnancy, on the faint chance of securing a living child. In such a situation, the termination of pregnancy should be advised. It is sometimes very difficult, however, to decide whether a woman should be placed in this category, or should be treated expectantly.

A patient with a less serious past history, and yet with one or several definite breaks in compensation, may often with care be brought safely through the pregnancy and confinement. This means constant watchfulness, adequate and persevering cardiac therapy, and a readiness to advise intervention, should a cardiac decompensation prove intractable to milder measures.

Given the mildest type of valvular lesion in pregnancy—that is a heart which in spite of an evident anatomical anomaly, has never shown any marked limitation in its field of response, how shall the possessor of such a heart be treated? During the early stages of pregnancy, much like a normal woman, with neither drugs nor rest. Her restrictions should be placed merely within the bounds of fatigue or breathlessness. Of course she should be carefully watched for such symptoms as dyspnoea, dropsy, or weakness. Some limitations to comfortable exertion, of course, come to all pregnant women, but when they appear in the pregnant cardiopath they should be considered indications for more than ordinary restrictions in her activity, and if they are more marked than in the normal woman, she should be put to bed. Digitalis should be administered if the response to rest is not satisfactorily prompt. If taken in time these measures practically always suffice.

Toward the end of pregnancy, the heart should be fortified with small doses of digitalis, even though there have been no signs of breaking down.

The mortality of various heart lesions complicating pregnancy and parturition are given in figures of different observers, which are seen to be most violently incompatible, varying from .39 of one per cent to one hundred per cent. This variation is not surprising when we consider how utterly different may be two patients, both labelled, say, "mitral stenosis." It is most misleading to try to group them. Each patient constitutes her own class, and in determining what that class is, one should bear in mind the fact that after all, the condition of the heart muscle, as shown by its function, past and present, is far more important than anything that can be learned by means of a stethoscope.

(For discussion see p. 77.)

THE LUNGS IN PREGNANCY.*

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Brooklyn-New York.

THE chief medical examiner of one of our largest life insurance companies writes that if one accepted as true the cause of maternal death given by the applicant for insurance, he would believe that the most fatal disease we list would be childbirth. Further investigation always reveals, however, that while childbirth was a factor in the great majority of these cases, the real cause was tuberculosis. This statement is well borne out by other figures. Bacon[1] reports that every year in the United States the number of women in the child-bearing age who die of tuberculosis is 44,000 to 48,000, and the number of these who were in the gravid or puerperal state, was between 11,000 and 12,000. In this city I learn that the number of married women of child-bearing age who died of tuberculosis last year was more than 1,145. The number of women under their care for tuberculosis, who date the origin of this disease to pregnancy, has been placed from the 25% of Jacobs and Pannwitz,[2] to the 63% of Trembly[3] of Saranac Lake, while pregnancy has been blamed by others as the cause of aggravation in mild cases, in 70% of their patients. Of the 25 married tuberculous women of child-bearing age under our care at St. Anthony's Hospital today, the number who directly dated their disease to childbirth is 13 (52%).

In the normal woman, pregnancy induces certain physical changes which in no sense can be called pathological. Her blood is decidedly increased in quantity, with a slight increase in both leukocytes and erythrocytes, in the liquid elements and fibrinogen. Her urine shows an increase of chlorides and a decrease of phosphates and sulphates used by the fetus. There is a decrease of iron in the mother and also a drain on her calcium content, as shown frequently by the impairment of her teeth and the delay in uniting of fractures occurring during this time. The general body weight is increased, far more in amount than the weight of the uterine contents, due to the deposition of fat—fat, not only in subcutaneous and muscular tissues, but as tiny globules in the cells of the liver, the spleen, the mammary glands, and the glands of the general lymphatic system. Women in normal pregnancy seem to have better health—to be less subject to infectious diseases than at other times. Even on the nervous system the effect of the blood, the enlarged thyroid, and the deep impression of another child coming into the world through her, heighten, or sensitize, all its functions, and, mentally, accentuate the ordinary phases of temperament.

These physical changes, nearly all of which are sought in the treatment of tuberculosis today, especially the increase of weight and improved quality and quantity of blood, with other observations, were responsible for the opinion expressed by Dr. E. S. Warren[4] in the Fiske prize essay in 1857—that pregnancy *does* retard the development of tubercles in persons predisposed to this disease. Since his time, that has been held to be true by very many physicians, although at the present time there are not many who subscribe to all his statements.

Tuberculosis has a special influence on the female sexual functions, on procreation and gestation. It is accepted as a fact that in this disease there is a marked increase in sexual irritability. Many explanations are given—the idleness with its increased opportunities, the increase of nitrogenous food, and the lack of muscular activity. But the tubercular toxins are also responsible. Turban states that the injection of tuberculin increased the sexual activities, and in some patients to such an extent as to preclude its use. The menses are quickly stopped in the female, but potency is not impaired in either sex. A woman far advanced in the disease, with a loss of 50 per cent of her body weight and suffering from mixed infection, may conceive; and a male patient of mine with muscles atrophied, general emaciation extreme, shortly before death impregnated his wife. Men have died almost during the act of coitus, frequently from a hemorrhage thereby provoked.

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* Read before The Brooklyn Society of Internal Medicine, Nov. 24, 1916.

Having become pregnant, the condition of the woman will depend on the severity and extent of the tuberculous process. In those with very slight trouble, or with quiescent lesions, there may be continued good health. *Nearly all* improve at first under the influence of pregnancy, but most of those with advanced lung lesions, especially if there be present any complications of pregnancy, as hyperemesis or other toxemias, begin to lose about the fifth month or later and continue more or less rapidly to go down in vital powers.

Labor, in all patients with tuberculosis or the tendency thereto, is a time and source of fearful danger. "The physical exertion, the mental strain, the loss of blood, the exhaustion, the use of anesthetics, the shock, and such operative obstetric work as abnormal cases may require, put a severe strain upon debilitated health" and upon a myocardium weakened from tubercular toxins. There is another element to which Hanau[5] has called attention. He believed, and found confirmation of his belief at autopsies, that in the deep respiratory efforts caused by anesthetics and the muscular exertion, the bacilli are drawn deep into the lungs and set up new areas of *acute* tuberculous infection which rapidly cause the patient's death. Operating surgeons are often sadly reminded of the possible effects of general anesthesia upon patients with even quiescent lesions in the lungs, so that Da Costa[6] says they should have performed only operations of strict necessity.

Following labor, while in a condition of general physical exhaustion, with blood impoverished in quality and quantity, with sleep broken, responsibilities increased, and in environment and with food not always conducive to her welfare, the mother begins and continues the nursing of her child, with *its* excessive drain upon her. It is not surprising that of the periods, gestation, parturition and puerperium, this last receives most responsibility for lighting up healed tuberculosis, for aggravating existing lesions, and for the inception of new ones. Statistics based on patients' statements are unsatisfactory; still Von Bardeleben[9] states that 71 per cent of his patients grew worse after parturition, and Shears,[7] Fishberg, Funk[8] and other observers, as well as our own experience, place the time in which most cases arise as the puerperium.

With the given effects of pregnancy upon tuberculous women, it must not be concluded that there is unanimity of opinion among observers. Bacon[1] states that one-third of pregnant tuberculous women die within a year thereafter. Rabnow and Reicher,[11] on the other hand, report 7 out of 10 working women under treatment for active disease who passed through pregnancy without aggravation of their trouble. Cohn[12] reports 53 to 58 cases apparently uninfluenced by gestation, and Kohne[13] thought the lung condition improved in 16 of 22 patients. Lobestine[10] of New York, has 34 per cent of his cases mild in character—*i. e.,* with lung involvement, cough and moderate temperature reaction. All of them had slight aggravation of symptoms during the pregnancy, but in nearly all the aggravation had subsided within twelve weeks thereafter; 16 per cent in a chronic, healed condition had no trouble. In our experience we have seen *many* women with a slight degree of tuberculous involvement successfully weather the storms of pregnancy and later obtain arrest of the disease. I repeat that statistics by a number of observers implying correct general diagnosis, classification and description on a subject like tuberculosis must be received cautiously. But I do maintain that all women with any degree of tuberculosis do not die during their pregnancy, nor within one year thereafter.

The condition of the child must also be considered. If tuberculosis exists only in the father there is no *direct* effect on the child as the impregnated ovum cannot be infected, and while the child may have lessened resisting power to disease in general, it will not have that marantic or tuberculous tendency derived from an infected mother. The prospective mother with little lung involvement will abort in 15 per cent of the cases: in 33 per cent if her disease be advanced. Carried to term, the child is not born diseased with tuberculosis. Mothers with genital tuberculosis may have children born infected, but the total number of children reported in literature as tuberculous at birth does not exceed in number *thirty.*[14] The child born of a tuberculous mother does not possess the resisting powers to disease, does not have the physique, nor internal organs with full powers of development. Moreover, it is exposed to the source of direct infection in the mother and with its weakened constitution, the presence of this source of infection, and nourished, or rather fed on breast milk of diminished quantity and defective quality, contaminated perhaps by tubercle bacilli, it rapidly succumbs to disease. Sixty-seven per cent of the children whose mothers died within one year of their birth also died within that year. Of 10,000 children under five years of age who die of tuberculosis annually in this country, three-fourths of them had tuberculous mothers.[1] The near presence of that source of infection must not be dwindled into insignificance. Armand De Lille[15] investigated the fate of 787 children in 175 tuberculous families. Of 396 not "placed out" by the Children's Aid Society, 60 per cent developed tuberculosis; of the 323 placed in the country, *not one* had developed tuberculosis at the time of report.

The time allotted me tonight will not permit a full discussion of those other diseases of the lungs, less frequent and for which reason, less important. But a few *symptoms* must be mentioned.

Cough of itself may cause hemorrhagic detachment of the placenta, and eventually interrupt the pregnancy.

Dyspnoea of itself, with its lack of O. for mother and fetus, if marked or causing cyanosis, may bring on abortion. Its treatment must depend on its cause.

Hemoptysis occurs frequently in pregnant women who have no tuberculosis, and its etiology is still obscure. It is of no serious import in such cases. If tuberculosis and pregnancy coexist, it occurs in 50 per cent and may have a very different prognostic significance.

Pneumonia, a serious complication of pregnancy, and if labor comes on, extremely dangerous. To the poisoned, fever-stricken woman, we have added the cardiac strain, the *cough*, the dyspnoea and cyanosis. Abortion occurs in 50 per cent. Vinay[18] places the mortality in pneumonic women whose pregnancies are interrupted at 68 per cent, whereas if not interrupted, his series gave 15 per cent mortality.

TREATMENT.

In no department of clinical medicine is exact physical diagnosis and sound judgment more requisite than in the diagnosis and care of tuberculous married women, and because of lack of exactness in diagnosis and the consequent unsound judgment, have we the great disparity in clinical statistics.

There are many points on which, I fear, all of us here will not agree, but many others on which we should stand unitedly for the patient's welfare. If a woman is suffering from disease to such an extent that she will jeopardize her life and bring into the world children dead or doomed to very short existence, she should not marry. If she marry, with knowledge of all the facts possessed by her husband and herself, the dangers of child-bearing should be emphasized, and the *legitimate* means of preventing conception urged, until such time as her health will permit the creation of fairly sound children. To a woman with inherited tendencies and no disease in the lungs, or with the moderate pulmonary disease at least two years quiescent, none of these instructions apply. Nothing more is needed by her than periodic observation.

All pregnant women should have a thorough examination of the chest and most careful study of the family and personal history from the standpoint of tuberculosis, as early in term as possible, and any deviation from that standard of increased health which we associate with normal gestation, must be immediately explained and corrected. What we already know, and what results may be obtained in the treatment of disease of the lung, so found, is surprising.

Dr. S. G. Bonney,[16] Professor of Practice in the University of Denver, in his book of pulmonary tuberculosis, reports many patients with far-advanced tuberculous disease favorably influenced by the pregnancy and the care they received. One of them I will briefly capitulate. A married woman twenty-six years of age was under his care for two years suffering from pulmonary tuberculosis when in 1903 she became pregnant. At that time she had involvement of both lungs, *beginning* cavity formation, excessive cough, expectoration profuse, rapid pulse and marked dyspnoea. Hyperemesis became severe and she finally consented to an abortion. This was successfully performed. She continued under the care of Dr. Bonney and two years later in 1905 was found to be again pregnant. There was now a large cavity in the left upper lobe with moist rales throughout that lung, and from the apex to the third rib in the other lung. There was a loss of 15 pounds in weight, severe cough, copious expectoration fever and dsypnoea. *Despite all the efforts of the physicians,* she refused to again permit the termination of the pregnancy. During her third month the cough and expectoration began to diminish and she gained in weight. She continued to gain in weight remarkably and this continued for months after childbirth. At the end of gestation the cough and expectoration had almost ceased, while the signs of activity in the lungs had disappeared. Despite a very severe and prolonged labor, with general anesthesia and a breech presentation, there was no set back in her pulmonary condition. She was not allowed to nurse. Her weight continued to increase, so that one year later (1906), she had gained 50 pounds and was allowed after five years' absence to leave the state for her home, with no signs of activity in her lungs and complete absence of cough and expectoration.

Now this was not an extremely unusual case, but one of many like it, described in his book and which may be quoted on his authority.

Let me state here that no reliance should be placed on the absence of bacilli in the sputum. For all practical purposes, finding these germs does not mean slight trouble, but a very great deal of trouble present and to come. The diagnosis of pulmonary tuberculosis should be made *before* the bacilli appear in the sputum and for our purpose no one thing exceeds in value a carefully elicited history.

Let me epitomize the history of a woman now under our care twenty-six years of age, of German parentage, but born herself in the city. She has been married ten years, has had five children, the first and second still living, the third, fourth and fifth dead. The third child, born in 1911, died of marasmus at eighteen months of age; the fourth child, born in 1913, died at fourteen months of age of lung trouble; the fifth child, born in 1915, died at ten months of age of marasmus. All the children were breast fed—even the last one, until within one month of its death. During the fourth pregnancy, she was treated for two weeks in one hospital for "a kidney trouble," and that baby was delivered in the maternity of another hospital. Now, although she had attacks of cough and during her last puerperium, loss of weight and night sweats, she never learned of any lung disease within her until after the fifth child died.

Among the forms of disease found, chronic pulmonary fibrosis—fibroid phthisis—rarely gives us concern, for its ordinarily good prognosis is not materially modified for the mother by pregnancy. For a contrary reason, the acute miliary, or acute florid types will not give us long concern for the patients, for they all—surely—die. Any form complicated by marked laryngeal tuberculosis will also have a fatal termination.

Those with lesions advanced, with pulmonary cavitations marked, emaciation extreme, and toxemia profound, leave us no hope for the mother under any circumstances, and little for the child unless the condition supervenes near the end of gestation. Then labor induced and delivery rapidly made, may secure a living, though perhaps not viable child.

Much as might be wished, operative obstetrics has not as yet contributed much to us, and the wave of opinion has surged from never interrupting surgically (with the pregnancy) to performing abortion or miscarriage on every woman with any tuberculosis whatever and performing it as soon as she is found pregnant. Trembley of Saranac Lake, believes in aborting every case and reports 29 such with but one recrudescence. But one must bear in mind the class of cases there treated, the environment and concomitant circumstances of that place. "No pregnancy can be interrupted," says Professor

Edgar of New York, "without more or less danger and hardship to the mother," and few have had results like Trembley. Veit reports 43.5 per cent and Von Bardeleben 36 per cent of their patients not helped by interruption, while Klein, Thorn, Rose and Hunziker have reported cases of acute miliary quickly following therapeutic abortion.

If the placental site has become infected, as a number of pathologists report to be the condition in as much as 45 per cent of these women (Lobenstine),[10] much more is needed than abortion or miscarriage, for the separation of the placenta throws into the traumatized area and into the general circulation large numbers of bacilli. This and the desire to sterilize have led to more complete operations, from cauterization of the planetal site, to hysterotomies and hysterectomies, tubal closures and tubal exsections, and openings of the peritoneal cavity through the vagina or abdomen. And still, Von Bardeleben [9] of Berlin, the most radical of these operators, has had the lung condition grow worse thereafter in 6 per cent of his cases.

It must not be forgotten that in the first five months the tendency is for the mother to receive the beneficial effects of the pregnancy, both generally and in her lungs, retrogression showing itself, if at all, after that time. Neither should the fact be lost sight of that abortion occurs by nature in 15 per cent of the early cases and with less danger to the mother than any operative work. After the second trimester, if the patient with *active* disease and despite adequate medical care—a therapeutic test as it were—has continued to lose in general health, but is still in moderately good condition, suffering from the usual form of chronic tuberculosis, and has neither lung changes nor septic condition too severe, the pregnancy may be interrupted with the hope well founded of holding the disease in check. These conditions are rarely found—so rarely, they might almost be called ideal. Bossi, who is an enthusiastic advocate of intervention, saw but 20 cases in ten years, upon whom he believed it could successfully be performed.

To arrive at the safest and best conclusion in any one case there is required the combined judgment of the clinician and skilled obstetrician, arrived at, not from a single examination and consultation, but after careful observation of the course of the disease in that individual. Urgent *symptoms,* such as persisting hemorrhage, cardiac embarrassment and increasing dsypnoea, may take an opinion-deciding influence of their own. Arbitrary rules of treatment are useless.

It must not be forgotten that many, many patients with active, though slight, lesions have successfully and repeatedly, as De Lee [17] puts it, gone through their pregnancies and borne living children; that patients with quiescent lesions aggravated by parturition, have later regained their former health; that *some* patients with far-advanced lung disease and suffering from mixed infection, have gone to term and been restored to fairly good health, and that many more will be saved in proportion to the early recognition of the disease and the utilization of all the means to arrest it.

In this paper, necessarily condensed at the expense of many phases of this subject, *let me emphasize:*

A. That tuberculosis associated with pregnancy, and because of that association, is often overlooked until it has passed the stage when most relief can be given.

B. That tuberculosis may have its inception (as usually called) or that an existing case may become aggravated during gestation, parturition, or puerperium, and that the period in which this occurs most frequently is the puerperium.

C. That the child born of a woman with advanced tuberculosis at the time of birth, is not necessarily doomed to a short existence.

D. That of surgical measures, abortion (i. e., in the first three months) has no indication as a remedial agent, and as a prophylactic for further pulmonary disease is of great danger and little value: that the same ruling applies to miscarriage (*i. e.*, in the second three months): that, theoretically, in the last three months indications may exist for the induction of labor and rapid delivery with good results, but that, practically, these indications are rarely met—with the great exception that for the purpose of *making labor* easier, the suggestion of Edgar that it be induced two weeks before the expected date, should prove of much service.

and, *finally,*

E. That *continued* care of the mother—following early diagnosis, under the best environment and possible circumstances, with the rapid cure of all the pregnancy toxemias, the shortened second stage of labor and the prevention of lactation—care *continued* postnatal, as well as prenatal—afford us the greatest hope at the present time.

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(For discussion see p. 77.)

CASES ILLUSTRATING EXCISION OF GALL BLADDER TO BE THE OPERATION OF CHOICE IN GALL BLADDER DISEASE.

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I WISH to mention one or two cases of gall bladder disease. It is a pretty big subject and the hour is late, so I might simply say that about twelve years ago, on this platform, when Roswell Park was advocating the treatment of the gall bladder in the same manner as the appendix, I said I thought there were a good many reasons why it might be done, but that it was well to go slow for a while. I felt that cholecystostomy was the proper operation to do because there was considerable doubt as to whether the gall bladder might not have some value in the economy, although not a large one. But I think we are coming in Brooklyn, as in other sections, to feel that cholecystectomy (excision of the gall bladder) is the operation of choice.

I won't read the cases; some of them are old cases of quite a good many years back whose gall bladders have been removed and who are perfectly well to-day, as far as I can learn, so I think that that disposes of the question as to whether or not one can go on just as well without a gall bladder as with it. I think we ought to operate earlier than we do, as it would do away with a great deal of expense and suffering, and the mortality would be very much lower than it is, although it is not extremely high except in late cases; and it would, I am sure, produce results far in advance of our present-day results.

I think that it would be wise to treat the gall bladder practically the same as the appendix,— get it out, in most cases at the first symptoms! One will find good reasons for excising the gall bladder in early cases on studying the specimens.

While we rarely see here in Brooklyn, or, at least, I have rarely seen the gall bladder which the Mayo Clinic has demonstrated to be not uncommon, the strawberry appearance of the mucosa, and also papilloma of the mucosa of the gall bladder, still we find conditions approximating that because the various pathological conditions of the gall bladder are all degrees of the same thing. We find we can very successfully, very simply, in the hands of men accustomed to that sort of work, do away with the gall bladder and consequently with succeeding complications of the serious kinds we are accustomed to meet with nowadays.

I just want to say a word or two in regard to the statement made here by Dr. Bloodgood last week. He said he had never seen a strawberry gall bladder in the Johns Hopkins Clinic and he also said that there were very serious objections to cholecystectomy. He spoke especially of stricture of the common duct following this operation, and also of the danger of large hernia due to sepsis when the ligature comes off the stump of the cystic duct and the bile and pancreatic secretions are allowed to come in contact with the wound and cause its further breaking down. I don't think Brooklyn will stand for that. I think, in a word, that that all means errors of technique. It is easy to excise gall bladders in the early stage, but one must proceed carefully and do a careful dissection. If the method as advocated by our guest Dr. Judd of excision of the gall bladder from within out is followed it forms a very perfect technique in most of the cases we are accustomed to meet with here. I have one or two of them with me. (I will just show two of them.) There is a type of gall bladder which we often find of acute inflammation with obstruction and just a single stone in the cystic duct. Stricture of the cystic duct often follows simple drainage. This patient had one small stone in the cystic duct. It is very easy to take that type of gall bladder out by just peeling it out, with no blood loss, but it must be done carefully and by a man experienced in abdominal surgery. It cannot be done in the simple way that cholecystostomy can be done, practically by anybody. Done by surgeons accustomed to careful dissection, the objections made by Dr. Bloodgood last week, will not hold. I am sure they don't hold in Dr. Judd's mind, and don't in the minds of most of us.

I have an early specimen of gall bladder here taken from a young woman in her first attack who had no stones, and that is the kind of gall bladder that surely ought to come out. That is the kind of gall bladder no x-ray picture will tell you about, and another point which I want to make is this: it would be decidedly unwise to let the x-ray decide for us whether a gall bladder should come out or not. It cannot be done. There are many cases of gall bladder disease where no stones are present. Those are the kind that should be removed. The x-ray, of course, will tell you nothing about those. There are, of course, very many cases where the x-ray cannot demonstrate stones, certainly in the hands of most roentgenologists, although a few men have become extremely skillful and they can usually diagnose gall stones; but it emphasizes the fact of gall stones being the important thing, which it is not. Cholecystitis is the important thing and gall stones are simply one factor in producing it.

This specimen gall bladder is the largest one I think I have ever removed. It could be palpated per vaginam in a rather elderly lady who was not very tall, and who made a good recovery.

THE DISPOSITION OF MENTAL CASES.*

Information to the General Practitioner in the Handling of These Cases

Sylvester R. Leahy, M.D.

WE have so many inquiries at the Psychopathic Ward daily from physicians, social service workers and relatives asking what steps to take with cases showing mental or "nervous" symptoms that it would not seem to be out of place to tell briefly how to dispose of these cases.

In years past, in the Boroughs of Brooklyn and Queens, it was necessary to go to the office of the Department of Public Charities on Schermerhorn Street, sign the necessary papers and then the patient was sent for and brought to the Psychopathic Ward at Kings County Hospital. For the past three years, however, all of this work has been done at the Psychopathic Ward, and all arrangements must be made there.

If a physician has a patient who shows frank mental symptoms, he may either call the Psychopathic Ward directly in an emergency, or better send the nearest relative to the Psychopathic Ward to sign what is known as a petition. This is simply a statement setting forth the facts and showing the reasons for considering the case a mental one. This statement is then signed and sworn to and becomes the first part of the commitment paper. The case is then sent for as soon as convenient with the ambulance in charge of a special officer, who is also a graduate nurse, and if the patient is a female one, a female attendant is sent in addition. The reason we like to have a petition signed and sworn to in this case is that we consider this as evidence of good faith and feel that relatives are unlikely to swear to statements which are not true.

If the Psychopathic Ward is unable to send for the patient immediately, and immediate care and attention is needed, then a call for the district ambulance can be sent in through a police officer or the nearest police station, and the case brought to the Psychopathic Ward in that ambulance with a police officer. If, after the relatives have been here and the ambulance is sent to the home for the patient, the patient is obstreperous and refuses absolutely to come, then recourse must be had to the Magistrate's Courts.

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* From the Psychopathic Ward, Kings County Hospital.

The law states that when information is laid before a magistrate, showing that any person is acting in an insane manner, he must issue a warrant for the arrest of that person. If, on arraignment, it appears that the patient is insane, he is then committed by the magistrate to the Psychopathic Ward for a period not exceeding ten days. If, after examination by the physicians here, it appears that the man is insane and should receive further treatment in a State Hospital, the relatives are so informed verbally and usually by letter also.

If the cases committed from court prove not to be proper cases for further treatment in a State Hospital, they are returned to court with a recommendation in special instances; for instance, if the case be feeble-minded or epileptic, a recommendation is made to the court that the patient be treated in an institution for the care of such cases.

If, upon examination, the case is found to be frankly a mental case but shows no dangerous tendencies and he is unlikely to be a menace to society, then the relatives are permitted to take the patient home upon the signing of a release with the recommendation that he be under the supervision of the family physician or taken to some suitable clinic.

If it is decided that the case is a proper one for commitment to a State Hospital, then an affidavit, setting forth the facts upon which the patient is believed to be insane, is made out and signed by two physicians, who are qualified as examiners-in-lunacy. This simply means that such physicians have been in practice for three years and have filed affidavits on specially prepared blanks, showing that they have been in such practice, with the County Court and also with the State Hospital Commission. The paper is then sent to the County Judge or Judge of a Court of Record for signature. If, however, the patient or his relatives demand a hearing, then the patient must be presented in Court. If, after a hearing, the Judge, before whom the case appears, is satisfied that the patient needs treatment at a State Hospital, he then signs the order committing him, and the case is immediately transferred.

There seems to be a good deal of misinformation about the length of time that patients are kept at the Psychopathic Ward here, most physicians and relatives feeling that they are kept here a full ten days and that the papers are then signed. The law specifically states that we cannot keep these cases here for a period exceeding ten days. If, from the history and our examinations here, it is found that the case is without doubt a mental one and that the patient requires further treatment in a State Hospital, the commitment papers are put through after a period of three or four days, because we feel that we cannot give the patient adequate treatment here in such small wards, the cases cannot be properly classified as they can in the state service and we feel that it is for the best interests of the patients that they be placed under proper conditions as soon as possible.

There seems to be also a great deal of misundersanding about the length of time that a patient is kept at a State Hospital, many people even feeling that they are sent to the State Hospital for the rest of their lives; others seem to think there is a definite period for which they are committed. There is no definite period mentioned in the commitment paper for the duration of treatment. This rests solely with the superintendent, and if, after several weeks or months' stay in the State Hospital, it appears from examination that the patient has recovered or greatly improved, then he is allowed home on a parole varying from thirty days to six months. A parole is often granted to patients who are not even well in order that they may be given a chance at home to see whether or not a change of environment might benefit them, and also in many cases to prove to the relatives, from their own observations, that the patient needs further treatment. For the past year or more, it has been the custom with the State Hospitals to have these cases report at clinics which have been established and which the physicians from the hospitals attend, so that their mental condition can be kept under an extended period of observation while at home.

We meet with much opposition here to the sending of cases to the State Hospitals, principally I think because the people in general, and often even physicians, do not understand the functions of a Psychopathic Ward, and do not fully realize what the State Hospitals have been established for.

We have only nineteen beds on the Female Ward here and twenty-five on the Male Ward, so that one can readily see how very limited our capacity is. A Psychopathic Ward, especially one as small as ours is, can be only for the examination of cases and no definite treatment can be carried out here, principally because our admission rate is so high. We feel that the case can be more properly treated at the State Hospital, and try to impress on the relatives that the patient is sick in the same sense as if he had a physical disorder, and we try to make them feel that the treatment is just as important in these mental cases as in physical cases, because after all, are not these cases ill in the same sense as if they had a physical disorder, and in reality isn't a physical disorder frequently a precipitating factor in these cases? This phase is not very frequently explained to the relatives by the family physicians and often results in a great deal of misunderstanding, which I think the general practitioner might correct if he were better informed.

It is needless to say that where the relatives are willing and able to pay for treatment in a private sanitarium, then they must secure the services of two examiners-in-lunacy, who are not connected with the Department here, and also pay these examiners their regular fee, and must make arrangements with a sanitarium in advance. I believe it is the custom in all sanitaria at the present time that the relatives must pay at least four weeks in advance before the authorities are willing to accept the case. It is also necessary, in selecting a sanitarium to which cases are committed, to find whether or not they are licensed by the State Hospital Commission for the reception of such cases.

We also receive a few patients here who apply for voluntary admission, requiring them to sign a voluntary admission slip, which simply states that they agree to obey the rules and regulations, realizing they are in need of treatment, and to give the physician-in-charge twenty-four hours' notice in writing before demanding a release. This gives us an opportunity of getting in touch with the relatives and informing them of the patient's mental conditions.

In addition to the above methods, certain selected cases will be accepted at the various State Hospitals as voluntary cases, but it is well before bringing such a patient to the State Hospital to get in touch with the superintendent, as only comparatively few cases will be received under this regulation. Patients to be received must be quiet, have a good realization that his mental condition is abnormal and that he needs treatment. He must also sign a paper, agreeing to abide by the rules and regulations of the hospital and promise to give ten days' notice in writing to the superintendent before demanding his release. This gives the superintendent an opportunity of having the patient regularly committed should he feel that the patient should not be released.

We frequently receive patients here whom we designate as "border-line" cases. These cases are often in their incipiency and we do not feel that the State Hospital would really be the best place for them. Much as we, who are in the work, try to assure ourselves that the old feeling against State Hospitals has vanished, yet this distinctly lurks in the minds of many of the laity, and there is still a stigma attached to a residence in a State Hospital, which is difficult to overcome, and I know from actual experience that this often militates against patients securing future employment.

Such "border-line" cases are mild depressions or elations, very early cases of dementia praecox, mild arterio-sclerotic disorders and early cases of general paresis. It seems to us here that the early functional cases can very well be handled by referring them for treatment to several psychiatric clinics which have been established in Greater New York. The Long Island College Hospital has established a clinic at their dispensary which is held on Friday afternoons from two to three and a physician from the staff of the Brooklyn State Hospital is in attendance on that day. Another clinic is held at the Dispensary of the Williamsburg Hospital on Saturday mornings from ten to twelve and physicians from the Brooklyn State Hospital and Kings Park are in attendance. An excellent clinic is one which is conducted at the Cornell Medical College Dispensary, 27th Street and First Avenue, New York City, under the supervision of the State Charities Aid Society, and is open to patients Tuesday, Wednesday, Thursday and Friday mornings from 10:30 to 11:30 and on Thursday evening from 7:30 to 9:00 p. m. Physicians from the Manhattan State Hospitals, Ward's Island, are in attendance. This clinic has also the advantage of having an experienced social worker in attendance who helps investigate home conditions, etc., and also aids in securing the cooperation of already existing sources of relief for financial and other aid required. This clinic has been established with a view to making it a model one in order to illustrate just what can be accomplished with these mental cases and the reports from this clinic are indeed decidedly encouraging and many cases have been helped. The Vanderbilt Clinic at Tenth Avenue and 59th Street also has a number of men on the staff of the Neurological Department, who are experienced in psychiatry, and is only too glad to handle cases that apply. In these clinics, various troubles and conflicts of the patients can be gone into, and as many of the mental breakdowns are a result of maladjustments to these troubles, the patients can be helped in securing readjustment and often tided over a serious mental upset with consequent loss of work and frequently difficulty in securing re-employment.

The early organic cases—arterio-sclerosis and general paresis—showing mental symptoms, can be given proper treatment and are often helped considerably.

Very frequently physicians and relatives ask to which State Hospital the patient will be transferred. Under the regulations of the State Hospital Commission, Brooklyn State Hospital and Kings Park State Hospital receive patients only from the County of Kings, and Central Islip State Hospital from Queens County. Where patients are severely ill or very old, we send them, from either county, to the Brooklyn State Hospital, referring the physically fit to the outlying hospitals. Many people are reluctant to have their relatives sent to Kings Park and Central Islip where the standard of care is excellent and where the patients can receive the proper treatment.

If the general practitioner will bear in mind the points which are outlined above, it seems to me he will be able to deal more efficiently with this class of patients who are often extremely hard to manage and whose relatives frequently cause a great deal of trouble. A physician will also save himself a great deal of trouble if he will remember the various means by which cases are received in this Department.

I would also urge that where a patient's illness is in its incipiency and is what is known as only "nervous" or worried, and the physician doesn't see improvement under his treatment, it be referred to some of the psychiatric clinics where an opinion can be obtained by which means patient will often be helped and also the family physician gain further insight into the condition and perhaps could cooperate in the further treatment of the case. The State Hospitals and clinics do not wish to take these cases out of the hands of the family physicians, but are willing to cooperate with the family physician so that these patients may get along at home rather than to be removed from society altogether, but it must be remembered that in order to accomplish anything with these cases, they should be taken early and given the proper treatment from the beginning.

DIAGNOSIS AND TREATMENT OF LATERAL SINUS PHLEBITIS.

REPORT OF AN UNUSUAL CASE.

Charles L. Stone, M.D.,

Brooklyn-New York.

ALMOST all cases of infective sinus phlebitis are of otitic origin, the ear condition being, usually, incidental to some exhaustive infective disease. The specific infecting organism, where it can be identified, is invariably the streptococcus. (Leutert, Bezold, etc.) McKernon has reported cases with a direct infection of the jugular bulb through the floor of the tympanum, thus excluding the mastoid. This is rare, however, and the usual pathological sequence is otitis media, mastoiditis, bone necrosis, epidural abscess (pachymeningitis), sinus phlebitis and thrombosis with spread of the infection by dissemination of the clot throughout the circulation or a further infection of contiguous structures producing brain abscess (leptomeningitis). Aside from these otitic cases, we deal in rarities. We read of the possibility of the spread of infection from the skin of the face and head through the sinus tributaries, or the spontaneus formation of clot in conditions of great exhaustion—the so-called marasmic clot of Virchow. Reynolds of San Francisco has recently opened a new field of speculation in his report of three cases of sinus thrombosis in cerebral compression, all of these three cases dying from the effects of an overlooked sinus thrombosis after the meningeal hemorrhage and consequent compression had been successfully relieved. In view of the foregoing, the following case which falls into none of the mentioned etiological categories and developed to a fatal issue through a succession of obscure and apparently unrelated manifestations, should be of special interest.

The patient, a previously healthy boy of four and one-half years, was first seen by me on the morning of April 1, 1916. The mother testified at this time, that on the preceding day he had eaten several freshly made crullers and shortly thereafter had vomited a considerable mass of undigested food and mucus. Vomiting was repeated three or four times, but had ceased several hours before my visit. Further inquiry added nothing to this, except the apparently unrelated fact that the boy had had a tooth-ache several days previous. Examination noted a decayed right lower molar tooth and a few slightly enlarged glands in the posterior triangle of the same side. Temperature and pulse were normal. A diagnosis of acute gastric indigestion was made and the case dismissed with appropriate treatment.

On April 3rd, two days later, I was again summoned and informed that the patient was dull and listless and showed no inclination to eat or play. There had been no further gastro-intestinal symptoms or added complaints. The patient was indeed apathetic but mentally clear. Temperature was normal, but the pulse was noted to be a trifle irregular and influenced in rate by changes of posture. Condition was otherwise unchanged and I persisted in the belief that I was dealing with a gastro-intestinal disorder. On April 4th, there was continued apathy plus a temperature of 101 degrees, per rectum and an apparent photophobia, evidenced by squinting of eyelids and wrinkling of forehead. There was nothing to account for these symptoms. The throat, ears, chest and abdomen seemed absolutely normal, and there was no complaint of pain or local tenderness. During the following two days, the patient's condition remained unchanged, neither better or worse, and the diagnosis remained in doubt. A Widal test, made during this period, was reported negative. On April 7th, one week after the onset of the disease, by the addition of certain symptoms, the case had developed into a fairly clear picture of meningitis and lumbar puncture was suggested. This was done later in the day with the aid of Dr. Ludlum, who had been called into consultation, and about two ounces of perfectly clear fluid under moderate pressure, was obtained. The clinical summary of the case made at the time of our joint examination, included the following. Dullness and apathy, with occasional fits of irritability, irregular pulse, continued temperature at 101 degrees, photophobia, slight ptosis of left eye lid, moderate retraction of the head with rigidity of the posterior neck muscles, absent knee reflexes, Kernig's sign and an extensor spasm of the fingers of both hands, a symptom which a study of the case in full has failed to explain. The glands in the neck were slightly larger than at the beginning of the disease, but were disregarded, as having no apparent connection with the symptoms.

On the basis of the above symptoms, the case was now considered to be one of beginning tubercular meningitis, in spite of the fact that later, that same evening, Dr. Hulst, who had been asked to examine the spinal fluid, reported it entirely normal. On April 8th, for the first time, the patient complained of headache and general muscular pains. There was a slight increase in the head retraction, and the rigidity of the fingers were very marked, the boy being seemingly unable to close his hands. In the region of the swollen glands there was a puffy edema, suggesting the possibility of deeply lying pus. Early in the morning of the 9th, I was informed that the patient had had a chill, and was complaining of increased pain in the head. At the time of my visit, a little later, I found that the temperature had gone up to 105, with a corresponding increase in the pulse rate and the patient looked desperately sick. The swelling, which I had noted in the posterior triange of the neck on the day previous, had extended upward over the base of the skull, reaching from the occipital protuberance to the mastoid. Just posterior to the mastoid, over the region of the emissary vein, there was considerable tenderness. Because of the chill with the rapid rise of temperature and the local changes posterior to the mastoid, in addition to the previously noted signs of meningeal irritation, I felt confidant at last that I was dealing with a case of sinus phlebitis and advised immediate operation. This decision was concurred in by Dr. Sherwood, who saw the case at this time.

The report of this case in such minute chronological detail, illustrates better than the best description, the silent and insidious approach of this disease and the necessity of its differentiation at various stages of its progress from disorders which theroretically should have no resemblance to it. I may further emphasize this point by mentioning that otological literature is filled with cases where sinus thrombosis has actually been mistaken for malaria, endocarditis, tuberculosis, puerperal sepsis, typhoid, pneumonia, adenitis, erysipelas and even adenoid infection.

The immediate indication for operation in this case was exploration of an apparently infected area. Incision was therefore made slightly posterior to the usual mastoid incision and extended downward over the swelling in the posterior triangle. Free pus was found in this latter region, and the bone over the sinus in the region of the emissary vein was found to be soft and necrotic. The mastoid cells and antrum were thoroughly explored and found to be normal, with the exception of a few cells immediately overlying the sinus. The middle fossa of the skull was opened by removing a small portion of the tegmen antri and the dura found to be apparently free of infection. The bone overlying the sinus was then removed exposing it from the knee to as near the jugular bulb as possible without risk of injuring the facial nerve. The sinus, which appeared as a soggy, liver like mass and very evidently contained clot, was then opened throughout the entire length of exposure. After expressing a considerable mass of broken down clot, it was then gently curetted toward the torcular until free bleeding was obtained from this direction. In spite of the fact that the sinus seemed empty in the direction of the bulb, very little bleeding was obtained from this region, indicating perhaps the presence of separate clot further down in the jugular vein. This was of course a clear indication for excising or at least tying off the jugular vein in the neck, but the condition of the patient at this point forbade the attempt and the operation had to be terminated with the hope of treating the jugular vein later. The pathological changes about the sinus were those very commonly found in this condition; *i. e.*, periostitis and bone necrosis, peri-sinus abscess, sinus phlebitis with clot formation. The visceral dura both in the middle and posterior fossae seemed normal and the presence of meningitis or brain abscess was not determined. The unique feature of the case was the entire absence of mastoiditis except for the involvement of a few cells located posterior over the sinus wall. There was no clue to the sinus infection unless the infection in the posterior triangle of the neck might be considered the original focus and the sinus secondarily infected through the mastoid emissary vein. Cultures were taken from the sinus clot and the surrounding pus at the time of operation, but surprising to say, were reported negative. Blood examination before operation showed a leucocytosis of 33,000 and a polymorphonuclear count of 83%.

Following the operation the temperature dropped nearly to normal and there was a complete remission of all symptoms for a period of several hours. Within twelve hours, however, the temperature again rose and thereafter remained between 103-106 degrees, and there was a complete return of all meningeal symptoms in an aggravated form, at times the patient being markedly delirious. About thirty-six hours after the operation, in the hope of relieving the condition, the dressings were removed from the wound. Nothing was accomplished by this, however, and the ensuing shock added to the rapidly increasing sepsis produced death in coma about two hours later.

The prior recognition of otitis media and mastoiditis is without doubt an essential preliminary to the diagnosis of practically every case of sinus phlebitis. Even with this aid, many cases certainly pass unrecognized or are discovered accidentally at the time of a mastoid operation. The total absence of any sign of ear or mastoid involvement in this particular case was misleading, and diagnosis was therefore not made until we had undoubted symptoms of general sepsis. This obviously does not occur until we have a breaking down and dissemination of the clot with the discharge of septic material into the circulation. Preceding this we almost invariably have a pachymeningitis with the formation of epidural pus, the production of a phlebitis involving at least the parietal wall of the sinus and lastly a sinus clot obstructing to some degree the venous return. This pathological sequence must require days for its development and yet is repeatedly overlooked even when its possibility is suspected. This is not necessarily due to any fault of observation but because its progress may actually be without symptom or sign. The physiology of the cerebral circulation offers some explanation of this possibility. The venous sinuses of the brain are not veins in the ordinary sense but form a sort of common reservoir drained through two outlets—the jugulars—and apparently the blood flow may be diverted to either side and the reservoir emptied as well through one vein as through two. To be sure we have at our disposal certain tests supposed to determine any interference with the normal flow. One—the so-called West-Beck Symptom—consists in the production of distension of the veins of the forehead and the fundus oculi on compression of the jugular opposite to the suspected lesion. As a matter of experience this effect is so transient and its recognition so dependent upon the personal equation of the observer, that as a practical diagnostic test it is almost worthless. In the text books, particular emphasis is accorded to the importance and value of Greisenger's Symptom—*i. e.*—swelling over the emissary vein of the mastoid—as an early diagnostic sign of sinus thrombosis, the inference or in fact the declaration being, that this is bound to be produced by any interference with the venous return at this point. It is obvious, even from casual consideration of sinus anatomy, that this could hardly be the case unless the clot directly occluded the emissary vein where it opened into the sinus. Recent writers on this subject—Graham, Oppenheimer and others—have contended that in reality the puffiness over the emissary vein region is not a sign of venous obstruction but is due directly to the presence of pus under the periosteum, and is therefore a late symptom of this disease. The history of the case reported seems to corroborate this. One other sign of venous obstruction—the recognition of clot in the jugular on deep palpation over this vein—might be utilized were it not for the possibility of producing the sudden death of the patient through the dislodgement of an embolus. In spite of our best efforts, therefore, we are often compelled by the very insidiousness of this disease to delay its recognition until the onset of various complications—*i. e.*, general sepsis or brain abscess—make its cure but little less than hopeless. Because of this, a single chill with the subsequent rise of temperature in the presence of otitic infection, is to many otologists the signal for immediate intracranial exploration. Wherever the possibility of erysipelas or malaria can be excluded, this attitude is doubtless justifiable, as there is seemingly no reason why intracranial exploration should not be as feasible as intraabdominal exploration. To differentiate the various possibilities, blood cultures and examinations should be made as a matter of course. While there is nothing characteristic of the blood count in sinus phlebitis to distinguish it from other septic conditions, it may at least aid us in ruling out typhoid and malaria and possibly indicate the extension of an already existing middle ear infection. Blood cultures are more valuable. Relative to this, we have the several conclusions of Duel and Wright, Oppenheimer, Gruning, etc., based upon a study of a considerable number of cases. First—with few exceptions, uncomplicated mastoid infections give negative blood cultures. Second—with few exceptions, sinus infections give positive blood cultures at some time during their course. Third—the absence of bacteria in doubtful cases would lead one to hesitate to explore until the possibility of all intercurrent disease had been excluded. As in so many other conditions, negative pathological findings are worthless upon which to base conclusions. Furthermore, in this particular disease, blood cultures are somewhat invalidated by the delay in obtaining reports and the uncertainty of obtaining the organism even where the blood is doubtless infected. This does not alter the fact, however, that a positive finding is of positive value in reaching a diagnosis and an indication for operation. Cultures should therefore be made in all cases of suspected sinus phlebitis and especially in those cases of mastoid infection where we have an unexplained chill and rapid rise of temperature.

Attempt has been made to divide the symptoms of sinus phlebitis into diagnostic groups, as for instance those due to sinus clot formation, those due to bacteremia and the absorbtion of bacterial toxins, those due to the lodgement of infected emboli in remote tissues and those due to the extension of the infection to the brain and meninges.

While such grouping may aid us in an understanding of the pathology of this condition it can hardly be of value as an aid to diagnosis. Waiting for symptoms of leptomeningitis or brain abscess, for instance, in order to confirm a suspicion of sinus phlebitis is the next thing to anticipating the autopsy, as such symptoms as well as those due to septic emboli usually indicate the fatal extension of a process that is more or less benign as long as it remains outside of the general circulation and external to the visceral dura. Where symptoms of meningitis or meningeal irritation precede the formation of sinus clot, we must do our best to determine the origin and the character of the infection by means of lumbar puncture.

Coming to the treatment of sinus phlebitis, we even now encounter considerable diversity of opinion and procedure. Although plenty of cases are on record where a septic thrombus or a clot infected with an organism of low virulency has gone on to spontaneous cure, nevertheless a passive expectancy must be poor treatment where we have any reason to suspect this condition. No matter what the symptoms, no one can determine in advance the precise condition within the skull, so that practically every operation for the relief of sinus phlebitis is exploratory and partly diagnostic. There is doubtless less risk in exploring a mastoid and removing the bony covering of the sinus for its inspection, than in permitting the development of symptoms until we have an unmistakable picture of the disease. Operation should therefore be undertaken early. After we have opened the mastoid and have removed the bony covering of the sinus, we usually encounter conditions which make the diagnosis complete and positive. These conditions are the presence of epidural pus, granulations or other evidences of pachymeningitis and some change in the normal luster and bluish coloration of the sinus. Usually it will appear dark red and dull, resembling a piece of liver. Where these conditions obtain, clot is present in the sinus and it is useless to attempt other tests, such as aspiration or palpation. The first may be entirely misleading and the latter dangerous. Provided the exposure of the sinus has corroborated the diagnosis of clot, the next step consists in opening the sinus itself after first extending the bone removal until we have reached well beyond the limits of the lesion. In case we are positive from inspection of the sinus, that the clot extends well down into the jugular bulb and vein, we may limit our bony removal in the direction of the bulb—this because of the dangerous loss of time and the risk of injuring the facial nerve in this locality—and tie off or excise the vein in the neck before opening the sinus. In opening the sinus, pressure should be made upon the upper and lower portions, well beyond the limits of the clot (wherever this is possible) and a broad incision made between these points. The clot should then be gently removed and the diseased outer wall of the sinus cut away. After removing the pressure from first the upper and then the lower end of the sinus, provided there is free bleeding indicating its patency beyond the limits of exposure, we may then finish this part of the operation by packing with iodoform gauze between the parietal wall of the sinus and the skull. Whether the operation should be considered complete at this point (as with some operators, it is) is a question to be decided entirely upon the condition of the patient. Certainly no operation for the relief of sinus phlebitis has fully met the indications without proper treatment of the jugular vein. Theoretically this is best obtained by making a complete exposure of the vein from the bulb to the clavicle, tying off below the clot (where there is any) ligating separately every tributary within the diseased area and then removing this portion en masse. By this means, we remove completely the infected nidus and prevent the spread of infection to contiguous structures or into the general circulation. The objections to this procedure are entirely practical and outweigh, usually, the theoretical advantages. Very often the vein is collapsed and difficult of identification, and even when filled with a cord-like clot, it may require considerable time to dissect it from its accompanying artery and nerve thus adding materially to the operative shock. It is generally considered better practice, therefore, with the average case and operator, to make a short incision anterior and parallel to the sterno-mastoid muscle in the middle of the neck, where the vein is best identified, and tie off between two ligatures. This can be accomplished by any operator who is capable of performing the skull operation and adds but little time to the whole procedure. Where the jugular vein has been thus treated, the surgical after treatment consists simply in the necessary change of dressings, the packing about the sinus being undisturbed for at least forty-eight hours. Generous support should be given to combat sepsis and autogenous vaccines used, whenever the specific organism has been identified. Secondary operation is indicated only for the treatment of subsequent developing brain abscess or pyemic focus, provided the operator has met the original indications and has thoroughly removed or isolated the infected clot, jugular vein and sinus wall.

EDITORIAL

THE CHINESE SYSTEM NOT FOR OUR DOCTORS

ON January 5th, a section of the N. Y. Academy of Medicine discussed the relative value of the preventive and the curative systems of medicine. We have been told that Chinese physicians are paid only so long as the patients remain well and that pay stops when sickness comes. Occidental medicine has looked for its pay when the patient is sick and expects to lose it when he gets well. Efficiency, prevention and standardization are the great catch words that are today sweeping from one end of the country to the other and the doctors are being caught up in the furore and being adapted to the theory that it is better to prevent disease than to cure it. Fine! By all means let us keep people well if we can—let us restore conditions that produced Methuselah if we can—and if we can make our living by so doing, let us make it that way. There is a premature finality about the present-day America, that reminds one of the lord high executioner in "the Mikado" who explained his failure to execute the hero by assuring the potentate that when he said a thing should be done it was as good as done, and that, therefore, his order to execute was the same thing as an execution. However much we may believe in preventive medicine we must not forget that there is still a deal of sickness—witness the present epidemic of grip—and the sufferers must be cured. The great American people are too prone to feel that they can disregard the element of time, they apparently forget that all growth is slow and that reforms do not spring forth fully developed as did Minerva from the head of Jove. We have the sick with us and we will continue to have the sick with us for centuries to come and curative medicine will continue to be of first importance. In so far as prevention can be developed all our energies should be turned to foster it and every physician should equip himself for prophylaxis, *but* he must not neglect treatment; the two go hand in hand and a well-rounded man will try and perfect himself in both branches of his work which are so closely interwoven that they cannot be separated. It is the failure to recognize this inter-relation that prompts the laboratory thinker on the one side to advance his claim that prevention is all important and the therapist on the other to forget that he should also be a sanitarium, a hygienist, a board of health and a medicine chest in one. H. G. W.

STANDARD FEES FOR DOCTORS.

THE action of the Bronx County Medical Society in establishing a new fee bill has moved the daily press to interview representative New York physicians on the subject of fees and the answers have been almost as varied as the interviews. It seems to strike the representatives of the press as something new that a body of physicians should publish a standard of charges. They are apparently ignorant of the fact that such fee bills have been arranged and published at intervals for years; one from the early part of the 19th century may be seen framed on the walls of the Library Building of the Kings County Medical Society composed at the time when the purchasing power of the dollar was high and dollars scarce. The impression seems to be that such a fee bill imposes upon the members of the Society a fixed charge from which they may not depart. It may be assumed that doctors are the best judges of what they should charge for their services and how they may best adapt their charges to the individual. If a physician decides that a particular patient is unable to meet a bill rendered according to recognized custom, we take it that there is nothing in the fee bill which compels the physician either to demand his full pound of flesh or to refuse to treat the patient. It has been generally understood that a fee bill simply provides a standard at which remuneration should be charged but in no ways obligates the individual, in particular cases; that is, if a physician decided to charge at the rate of $3.00 a visit, he could point to the fee bill as his authority that that was the ordinary charge, but if unusual circumstances called for it he might either increase or reduce his bill in accordance with those circumstances. The idea was to provide something that would establish his right to charge on a definite basis. One is tempted to smile at the conclusion drawn in the article in the N. Y. Times for January 14, that the diversity of opinion among physicians in regard to this particular bill is to be taken as evidence that physicians will never form a trade union. So long as physicians feel free, as they undoubtedly do, to treat anyone whom they choose, it is perfectly evident that they will never be tied to any fixed schedule of charges and it is quite proper that they should have the right to exercise independent judgment in individual cases. Times change and conditions change and the rate of doctors' fees must change with times and conditions. The increased cost of commodities so widely advertised in the papers today will sooner or later compel most physicians to charge more for their services to those who can afford to pay the increase; but there will always be a worthy class whom it is a pleasure to serve and whom the doctor will charge according to their ability to pay and not according to rule of thumb. "The poor ye have with ye always" and the poor are as much in need of doctors' care as the rich, often more so. The proposed Health Insurance Act will, if passed, provide for a large part of the smaller wage earners and an equitable arrangement will be made so that physicians will be moderately recompensed for their care; the well-to-do will have to meet the increase and the very poor will still be cared for. No general fee bill can be devised that can cover all these cases except in so far as it may indicate what is a proper average charge for the locality which it covers, and there the matter rests. H. G. W.

MORE DRUG LEGISLATION.

FIRST came the Boylan Law, then the Harrison Law, and now Mr. Charles B. Towns has appeared before Congress with a pamphlet urging still further restrictions. Mr. Towns in his latest contribution to the subject of drug abuse acknowledges that he perpetrated the Boylan Law and regrets that it was emasculated by the medical profession. He further points out that even in New York State it is possible to obtain narcotics in any desired amount and to traffic in them largely because of the failure of adjacent states to provide corresponding legislation. It is unnecessary to lay again before the profession of this state the various reasons that Mr. Towns has advised repeatedly for the control of the drug habit. Physicians as a rule realize their responsibility and are for the most part conscientious in their use of habit-forming drugs; in point of fact it is doubtful whether a canvass of all physicians' supplies would show enough of a stock of narcotics to cause any considerable ground for criticism. But Mr. Towns seems to be convinced that the evil should be rooted out and so would begin at the root; he makes the statement that, "A basic way to deal with this question would be to restrict all uses of opium to its crude form and to its forms as laudanum and paregoric—Where an opiate is indicated there are very few instances in which the required results could not be had from the administration of the crude product—If the traffic in and sale of this drug was reduced to traffic and sale of crude opium, it would not inconvenience the medical profession in its legitimate use of the drug in any way whatsoever and it would immediately stop this large illicit traffic that has grown out of the habit-forming drug situation."

One is interested to know on what authority this generalization was based. We have it in mind that before advancing science introduced morphine and the other accurate forms of opium derivatives, Thomas de Quincy wrote his "Confessions of An Opium Eater" and told how he drank laudanum from a decanter. It is not reasonable to believe that so long as human weakness suffers from pain or the apprehension of pain, the bulk of humanity will deny itself morphine as indicated for the sick; for the minority who abuse it, there are other ways to deal with the problem. Neither will physicians as a class consent indefinitely to lay restrictions governing their right to employ drugs as their judgment indicates.

There are certain reasonable restrictions in the use of habit-forming drugs which the profession is ready to accept. If every state would standardize its public health laws and accept a uniform Federal relation, enough would be accomplished to check the great bulk of traffic in drugs. The writer has again and again emphasized the impotence of legislation that is not based on a wide popular conviction and it is folly to clutter up the statute books with more restrictions until the general public is ready to back them up. In so far as Mr. Towns, or any other reformer, will urge reasonable measures step by step as they are indicated, this Journal will back him up, but it disagrees with this latest fantastic pronouncement of his that proposes to take us back to the early Victorian era in England plus a Russian despotism.

H. G. W.

CORRESPONDENCE.

DEAR Mr. Editor:

Your editorial on "Movies and Morals" has aroused my interest. I think it well that our journals discuss at times the moral problems as well as the professionally scientific, and I trust you may consider my comments, not as contrary to your views, but supplementing them. The physician has got too far away from the moral side of life. I do not mean that he is immoral, but he was wont to be looked upon as next to the clergy in such matters. We have become commercial and the real altruistic spirit that our profession has boasted is becoming a tradition only.

In the first place why not transpose the words of your title: "Movies and Morals"—why not "Morals and Movies"? If we can by any means make the morals of our community what they should be the movies will be the least of our worries. I believe, with the worker you quote, that the movies fill a good position. They are not of the highest intellectual entertainment but they are better than "back-room" card playing which they have supplanted in some quarters. They are a forward step in our social evolution. The fact that they are not perfect and may, at times, be immoral makes it necessary that they be under control. The Board of Censorship should have our support and our advice. The center of interest to the movie men this winter is the Sunday-opening question which has been variously interpreted by the courts. This question should also be of interest to the broad-thinking public. Is there any excuse for these shows being open on Sunday when most other business is suspended? The good law interpreters of the state think it unlawful for Sunday base ball if admission is charged. Let them apply the same reasoning to the movies, or let us make the law so that they shall have to apply the same rule. If it is immoral for one to sit on a Sunday afternoon in the open air and watch a good clean ball game, how can the same authorities, under the same law, give immunity to movies housed in a small space? Cigars, candy and drugs are considered necessities and are sold on Sunday, but the druggist who complies with the law can sell no other article in his store of sundries except what is prescribed or is intended to ease the sick; yet the movies are open to charge the usual fee for the usual performance that they have already staged twelve times during the preceding six days.

The world moves on. The movies have taken the place of "Old Sleuth" with the young. It is merely a matter of time and environment. And yet, Mr. Editor, while, as you say, we all passed through that stage, most of us have come through to be respectable citizens. It shows we are all of the same grain and have got to go through the stage of "Old Sleuth" and corn-silk cigarettes (we used to alternate ours with sweetfern as more aromatic) or some modern sitting of the same sort of deviltry. In this connection we also remember the long-faced piety of our elders born of Puritanism that provoked us to jump the fence to see if there was not some real fun on the other side. It has taken some of us a long time to see that we left something worth while when we made the jump, and getting back we have probably brought some burdocks on our clothing, or some cow dung on our shoes from the wood lot we explored, but, back, we find that there is a real man's work and a real man's religion far removed from the miserable long-faced piety which scared us in childhood, and in which we can rub shoulders with our neighbor and work for the good of the community in which we live, whether it be for the regulation or suppression of the movies, or of some other evil that there exists.

You say in closing that these things should have some thought on the part of the profession. That is my excuse for burdening you. They have had some thought and a suggestion for the solution. I have said that the physician is looked upon (or used to be) as next to the clergy in matters moral. Now the clergy have their hands tied. They are denominational and bound more or less to a sect. The doctor is free, taking what form of religion he chooses, and yet he has a hold, if he chooses to exercise it, over a large element. When it comes to a matter of reform I believe we have got to look to the church for it. It has been the church's part in society in ages past and is now. It may be that the church needs reform first. Then it behooves the physician (who is next to the clergy) to get in and reform it. Working through the church there are many ways of doing community service. (I use the term community service instead of social service, which is in general use now days, so not to confuse it with the social service work of the hospitals which is mostly professional, but I mean social service in its broadest sense.) There are in some sections men's clubs connected with various churches whose social service committees unite to form a general committee, interdenominational, to take up the general community service. Physicians who can interest themselves in such a work in their own section through some such affiliation will not only be able to do their part toward mitigating objectionable movies and other evils from the community, but can help in the matter of education of the people, and, as you have intimated, Mr. Editor, it is the education of the people that will put an end to all of these questions. FRANCIS A. HULST.

Postscript.

While quite foreign to the point I wished to bring out, I wish to comment on your reference to Miss Kellerman as an antithisis to the educational movies. I doubt if you have seen "The Daughter of the Gods." It is a beautiful film to which I saw fit to send my children during the holiday week. I see nothing immoral in it. If Miss Kellerman is nude, it is when she is so far from the camera that none could tell it. It is essentially a child's fairy story, and if the adult sees anything immoral in it, it is because he has not learned to look upon the beautiful things in life with the eyes of an innocent child. It may perhaps be well to let our children see the beautiful side of nature before they reach the age that instills the licentious into it. It may give them different views at adolescence. F. A. H.

IN MEMORIAM

Dr. Paul Monroe Pilcher.

IN the passing of Dr. Paul Monroe Pilcher, the Brooklyn Surgical Society has lost a comrade of rare attainments, noble character and genial personality.

We do not need to eulogize our Colleague. Nobility needs no eulogy.

The flower that blooms into beauty and sheds its perfume tells its own story. We saw the splendid promise of his life just reaching fulfillment, we felt the warm glow of his fragrant personality, we all loved him—and that's enough.

He belonged to the select company of Master Workmen whose ideas have enriched our art, and whose contributions have made a notch in which a climbing foot may find a firmer hold.

He touched life at many points, but to every task he brought the vital touch, and gave to the humblest service a mark of distinction.

The passing of Dr. Pilcher is surrounded with peculiar pathos, if not a touch of romance.

There is a smug complacency that deafens its ears to the call of service and rests content in slippered ease far from the noise of battle. To such it may seem a prodigal waste that this life, so full of promise, not yet at the full realization of its usefulness, should so soon be sacrificed on the altar of service. And yet he died as all true men would die—on the firing line with his face to the front.

Where duty called he counted no cost and dreaded naught but cowardice. He realized that there was no great achievement without a great adventure and no great adventure without a challenge to fate. And so undaunted, he made the supreme sacrifice for an idea which cannot die.

The passing of such a character leaves a gap in the ranks. The mystery of it all is beyond our ken. Sorrow loses its sting only in the assurance that these noble dead cannot perish if they survive within ourselves.

The memory of such a comrade fills life with a new splendor; hallows and enobles it with a new purpose.

William Francis Campbell,
Edwin Howe Fiske,
John E. Jennings,
Walter Aikman Sherwood,
Raymond P. Sullivan,
Committee.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting held Nov. 2, 1916.

The President, Dr. John E. Jennings, in the Chair.

Case of Gastrojejunostomy With Closure of the Duodenum and Cholecystostomy. Patient. X-rays.

Onslow A. Gordon, M.D.

The first case that I wish to present is a gastrojejunostomy with closure of the duodenum and cholecystostomy.

The patient, 39 years old, referred to me by Dr. M. L. Bodkin, had suffered from "indigestion" for about two years. She complained of pain in the epigastric region, often associated with nausea and vomiting. The pain was usually relieved by taking food and alkalies. Her vomiting usually occurred about two hours after meals and was, as a rule, sour and burning. She had on two occasions vomited almost clear blood and she had noticed blood in her stools. During the past year she had lost forty pounds. With this classical history and physical and laboratory findings substantiating it, the diagnosis was apparent.

The patient was operated on June 4, 1915.

The pathology found at operation was an indurated ulcer just to the gastric side of the pylorus and a gall-bladder containing several calculi. The ulcer was treated by a posterior gastrojejunostomy with exclusion of the pylorus. The gall-bladder was drained after the usual manner. The interest in this case, of course, centers in the subject of exclusion of the pylorus. The advisability of closure of the duodenum has not been definitely established and advocates of this procedure are not at all agreed as to the most desirable method. In this case the pylorus was closed by the simple method advocated by Berg. A heavy linen purse-string suture was carried around the posterior stomach wall at the pylorus and tied, thus closing off the duodenum. This closure has remained permanent up to the present time, a period of sixteen months, as will be shown by the radiographs of Dr. J. G. Williams.

The patient made an uneventful and complete recovery and since operation has gained about fifty pounds in weight. The patient is submitted for your inspection.

Excision of Elbow Joint. Patient.

Onslow A. Gordon, M.D.

The second case, an Italian laborer, age 41 years of age, whose only complaint was swelling and limitation of motion of the right elbow joint, was referred to me by Dr. J. P. Glynn. His previous general history was negative. His Wassermann was negative. There was no previous history of a definite injury to the elbow joint.

Examination showed a well-developed man with no apparent pathology except in his elbow which showed a swelling extending about 5 cm. above and below the joint. The swelling was about 15 cm. in circumference. The trouble began gradually about three months before examination. He first noticed some stiffness in using the elbow. This was followed by a gradual increase in size. There was at no time severe pain in the joint. He never noticed any constitutional symptoms; the elbow was simply swollen and stiff. A diagnosis of a tubercular joint was made and excision advised. A subperiostial resection was done in July, 1916. About 3 cm. of the humerus were removed above and about 3 cm. of both the radius and ulna were removed below. The bones were soft and friable and at one point almost necrotic. The wound was closed without drainage and the patient made an uneventful recovery. This case is submitted as an illustration of good functional result following excision of the elbow which will probably permit a laborer to return to his usual occupation. The patient is submitted for your inspection.

Cholecystectomy. Patient.

Onslow A. Gordon, M.D.

The third case is a woman, aged 60 years, referred to me by Dr. S. O. Shumway. Her previous history is negative except for typhoid when 39, and occasional attacks of what she called rheumatism. She had suffered from "indigestion" for several years and occasionally had attacks of nausea and vomiting. She had never been jaundiced. When I saw her she was suffering from epigastric pain with well marked tenderness over the gall-bladder. Operation was advised and on March 1, 1915, a cholecystectomy was performed. A typical strawberry gall-bladder containing many small calculi was removed. The patient made an uneventful recovery and says she has never been as well as at the present time. I submit this case, a cholecystectomy, with the first case a cholecystostomy, both of which have made excellent recoveries, to show that it is my opinion that at this time when we hear so much said in favor of the adoption of a decided stand for or against removal of the gall-bladder, that excellent recoveries are made following each type of operation.

Paper: "Carcinoma of the Rectum." Specimens.

H. Beeckman Delatour, M.D.

(See p. 538, Dec., 1916.)

Dr. James C. Kennedy, in discussion, said:

"The ground has already been pretty well covered, but I would like to touch upon the point of diagnosis.

"It is at times very difficult to diagnose cancer when it is situated in the upper rectum or lower sigmoid, particularly when there is obstruction, either partial or complete. In such a case the growth is too high to be reached by the finger and tympanites is usually present in those cases so that palpation is of very little use. The proctoscope or the sigmoidoscope, because of the stricture which is usually present and high up, does not help us. The history of the patient does not help out very much for the reason that they frequently date their trouble from the time the obstruction sets in. I had such a case in 1908, in a patient forty years of age who was healthy except for a tumor the size of a duck's egg at the recto-sigmoidal junction, which I discovered when the patient's abdomen was very flat, but because of the extensive tympanites which was present when two eminent consultants saw him, when the tumor could not be felt, an operation was delayed fourteen days, and then, after every medical means had been given a trial, he was taken to St. Mary's Hospital in an exhausted and toxic condition. Under cocaine anesthesia we did a left inguinal colostomy as close to the point where I felt the tumor as possible, and the gut was opened at once. The man's improvement was marked and rapid. In four weeks' time we opened the abdomen and excised the tumor, which was at the recto-sigmoidal junction and proved to be an adenocarcinoma. The gentlemen mentioned possessed diagnostic abilities beyond reproach, however, insisted that he had impaction. This is simply a type of the cases that we have where diagnosis is very difficult. The patient lived comfortably for one year, but finally metastasis took place in the abdominal wall, followed by a fecal fistula, and later on he developed pneumonia which caused his demise.

In connection with cancer of the rectum as the surgeon usually sees it, colostomy is perhaps the more important subject to be considered. Colostomy to a man with obstruction from cancer of the rectum, is at once a boon, and at the same time it is something secretly to be dreaded, as Dr. Delatour said. There are numerous methods of performing the operation of colostomy, permanent or temporary as the case may be, each method having its advocates; nearly all give relief with much discomfort.

I look upon cancer of the rectum as inoperable when it involves the upper rectum and perhaps the lower sigmoid with a metastasis of the pelvic glands and perhaps the bladder and other organs higher up, with the bowels obstructed or nearly so. It is my practice in such a case to do a permanent colostomy.

I consider a cancer of the rectum operable when the growth is situated in the rectum within touch of the finger or two and a half or three inches from the sphincter, or when involving the rectum higher up, even to and invading the lower sigmoid and when by every means at our disposal metastasis is not found to be active. Surgeons differ in their methods as to the treatment of this condition. I have, in the low cancers, operated from below in one sitting after the method of Lesfrank. The combined method described by Dr. Brinsmade, making a median artificial anus through a low transverse abdominal incision, followed sometime after by excision of the rectum, I believe is a more radical and excellent plan in suitable cases. Through the courtesy of Dr. Brinsmade, I have seen a few patients on whom he has done this operation and it seems most satisfactory. To my mind, however, the median abdominal incision has many advantages over the low abdominal incision. It not only permits an ocular inspection of the cancerous growth but also of all the abdominal organs where metastasis might take place.

The operation of invaginating the rectum, making a slit in it, through which the sigmoid is pulled and allowed to unite by granulation, I am sorry to notice does not meet with Dr. Delatour's approval. Howard Kelly of Baltimore has reported several successful cases by this method. I have not done this operation, but it struck me as being a splendid substitute for colostomy.

The methods of doing the combined operation are numerous and often vary, as Dr. Delatour has said, according to the feelings of the individual operators.

Dr. Lewis S. Pilcher, in a paper read before the Kings County Medical Society in 1909, made the statement that in estimating the value of surgical operations for the cure of cancer "It ought always to be made clear and plain that those advanced cases of cancer anywhere (and this may apply to the rectum as well) belong to an entirely different category from those still in the early stage of the disease." I think we can all subscribe to this. It is the observance of this rule that frames our judgment and decides whether in any given case of high cancer of the rectum we are to palliate or operate radically.

In a paper written by William J. Mayo (which Dr. Delatour referred to) and published last month in the Journal of the American Medical Association, on the subject of cancer of the second half of the large intestine, he incidentally alludes to the Mikulicz operation as applied to the recto-sigmoidal cancer. He states that it is astonishing how in some cases the upper part of the rectum can be separated to within an inch of the anus. He does the operation that he reports there by bringing the tumor to the surface and stitching the two arms of the gut, then stitching the peritoneum around the arms of the gut and leaving the gut outside of the abdomen for some few days when it is excised leaving a spur which can be taken care of later by clamping of the artificial anus. The gut will either close itself or can be closed by sutures.

Speaking of colostomy, Dr. Mayo in this same paper also remarks that at times it is better to terminate these extensive complicated operations for recto-sigmoid cancer by a permanent colostomy.

The whole question of operative procedure in any case of cancer of the rectum simmers down to this: that the surgeon is judge, jury and high executioner, and it has always been my opinion that the surgeon's judgment should always outweigh his skill in the handling of instruments.

Dr. William B. Brinsmade, in discussion, said:

"I have had the opportunity of showing a few of these cases to the Surgical Society. One of the points in my operation is that there should be a large dependent sac of sigmoid, enough to hold a considerable amount of feces. I have learned to do the operation the way Dr. Delatour described it tonight, and it seems to me, after all that has been said on the subject, that this is the very best method. A transverse incision is made, the gut is cut across well above the growth and a second small incision is then made through the skin anywhere from two and a half to three and a half inches above the transverse incision, just to the left of the median line. This brings the opening well above the pubic hairs, which I think is of great importance. By blunt dissection through the fibers of the rectus, keeping well in front of the peritoneum, a passage about two and a half inches long is created down to the transverse incision. The proximal cut end of the gut is drawn through this passage and fastened to the peritoneum at its point of entrance in the abdominal wall and to the skin at its exit.

"As I have already said, I have shown a number of these patients to the Society and as most of you have seen them, there is very little more to be said. If there is such a thing as a satisfactory anus I think this is it. I have had nine of these cases, Dr. Watt, two, and with those of Dr. Fiske, there is quite a series of good results. It is a very satisfactory procedure as far as the patient is concerned. The fibers of the rectus seem to contract the gut in abdominal wall and leave a dilated pouch behind."

Dr. Earl H. Mayne, in discussion, said:

"In those cases of cancer of the rectum that are inoperable or where there is some physical contraindication to a surgical procedure and where the cancer can be exposed by the proctoscope, there is a method of making the patient much more comfortable at the same time lessening the disagreeable discharge which is often present. I refer to the use of the fulguration spark of the high frequency current. I have treated two cases by this method in old men where there was a very marked kidney disease and very high arterial tension. The cancer could be exposed by the proctoscope and with the high frequency fulguration spark, the exposed growth was entirely destroyed; and the obstruction was greatly relieved. I have one man now whom I have treated for eighteen months and he has been made very comfortable through this method. He is seventy-seven years old with a very serious kidney condition and marked arteriosclerosis. It is a method which has distinct advantages in this class of cases."

Dr. H. Beeckman Delatour, in closing the discussion, said:

"I think, Mr. President, that the one thing we all have to regret is the difficulty of diagnosis. It is probably one of the most difficult of all the conditions within the abdomen to diagnose in the early stage. Many cases have symptoms extending over a period of some time which are suggestive of carcinoma, but case after case goes on never developing the final symptoms of carcinoma. In other cases the first definite symptom of a serious condition of the bowel is an acute obstruction, and the difficulty of the medical man, the family attendant, is great, and it is, I think, impossible to diagnose many cases as early as we would like.

"When we come to the cases in which acute intestinal obstruction exists, as I said in the paper (and I want to emphasize it again; it is the teaching of all), never attempt the complete operation until the obstruction has been relieved and the intestine has been given a chance to empty itself. A colostomy is all that should be done as a primary procedure in such cases. A colostomy of that sort may simply open the bowel for drainage, the bowel being stitched to the skin; but in cases in which exploration has been made and it has been determined that the growth cannot safely be removed for one reason or another, whether because of extension to the liver or involvement of the bladder or something more, our colostomy should so be performed as to shut off the passage of feces through the distal portion of the intestine; in other words, care must be taken to absolutely prevent the fecal matter from passing down the rectum and over the carcinomatous growth. If we do that, these patients may live for some time in comparative comfort, but if we make a permanent colostomy which does not prevent the fecal current from passing down the rectum we do very little for these patients.

"We can instruct patients with a colostomy as to the care of the bowel afterwards, which is a very important part of the procedure and makes a great deal of difference in the comfort of the patient afterwards. If they will take a cathartic once a week and thoroughly clear out the bowel and try to develop the habit of keeping the bowel from moving more than two or three times a week, which is something most of these patients can do, there is very little use for an apparatus. The reason why I use an apparatus in my cases is because most of my patients feel safer with the apparatus than they do without it.

"As to the method spoken of by Dr. Mayne: I know of one or two cases in which fulguration has been used with decided benefit and it should certainly be given to those cases on whom we can do little in the way of palliation."

TRANSACTIONS OF THE BROOKLYN SOCIETY OF INTERNAL MEDICINE.

Regular Meeting, Nov. 24, 1916.

Pregnancy, From the Viewpoint of the Internist.

(See pp. 46 and 50.)

Dr. Harvey B. Matthews, in discussion, said: "There isn't very much to add to what has been said. This has been a very interesting meeting, particularly from the obstetrical point of view. We obstetricians can learn a good deal from the general medical men, but the trouble is we do not get a chance to come in contact with them often enough.

"Irrespective of what has already been said, there are two points that I would like to speak about in Dr. McGoldrick's paper, namely, first congenital tuberculosis—the direct transmission of tuberculosis from the mother to the child, and second, the interruption of pregnancy in the T. B. woman. Novak and Ranzee have found that 70 per cent of placentae from known T. B. women contain tubercle bacilli. There are also several American workers who have found tubercle bacilli in placentae and in the blood of the umbilical veins after delivery. Norris, of the Phipps Institute in Philadelphia, who has done considerable work along this line, states that the placentae in 20 per cent of cases of tubercular women contain tubercle bacilli, and in the vast majority of these cases the blood from the umbilical vein also contains tubercle bacilli; we therefore can say positively that these are cases of direct transmission. As a matter of fact, Jacobi has said that 70 per cent of these children die before they reach the twelfth month. Woodruff and Miller, of New York, studied 150 cases and found 51 per cent of the children were positively tubercular. Floyd and Bowditch, of Boston, found 66 per cent of cases positively tuberculous. Thirty-six per cent of this 66 per cent showed pulmonary tuberculosis, hence I think it is highly probable that there is quite a number of these children who are positively tubercular when they are born.

"The second question was answered by Dr. Hussey with one exception. We agree with what he said except that if a woman has a latent tubercular process—that is an inactive one or a mildly-active one, she may have an abortion produced in order that she may receive sufficient sanitarium treatment to give her a chance to return to normal health, and then, should she become pregnant, allow her to go to term and be delivered without, perhaps, causing a lighting up of her tubercular process. We do not, therefore, agree with Dr. Hussey when he says that every proven case of T. B. should be aborted and hysterectomized. Interruption when indicated can be done best, we think, under spinal anesthesia and by anterior hysterotomy. By this method we avoid an inhalation anesthesia, and anterior hysterotomy is much quicker and causes less traumatism than dilatation and curettage. Spinal anesthesia avoids the liability of setting up a new process in the lungs which is always apt to occur after inhalation anesthesia. Spinal anesthesia in our experience here worked very nicely in these cases.

Dr. Augustus A. Hussey, in discussion, said: "The questions that have been brought up are ones that we have to consider constantly and I think that all men who are dealing with obstetrics are glad to have help from the internists. I feel, from my experience in hospital work, that formerly these questions haven't received the attention from the internist that they have deserved, and that, therefore, a great deal of the burden has been thrown upon the men who are taking charge of obstetrics, chiefly in hospital work. I am glad that we are now able to call on internists for help.

"I think that a pregnant woman with a heart lesion requires the attention of a man who is skilled in the treatment of heart disease, as well as the attention of a man who is conversant with the care of pregnancy. Especially is that true in the final act of pregnancy—labor.

"The question of the treatment and management of heart cases in pregnancy has occupied our attention this last year or two to rather a considerable extent. We have seen in our service at the Brooklyn Hospital quite a number of cases of defective hearts and many of them have presented rather interesting problems. In all those cases we have had the help of the medical men in our diagnosis and suggestions from them in the treatment, and I wish to say that we have profited greatly by such consultations.

"I do not know that I would care to indorse the statement of the reader of the first paper in which he said that if a woman with a heart lesion had to choose that she would be better off in the hands of the general practitioner than with the obstetrician, for I think that many of the problems that arise in such cases are not adequately handled today by the general practitioner.

"We find that the questions that are of most importance in these cases are the time for interference with pregnancy and the method of interference and the method of handling full-term labor.

"It has been our rule to terminate pregnancy in cases where the heart is unable to bear the burden which is thrown on it by that pregnancy and where the heart has previously been found to be incompetent to successfully carry on the burden of the work expected of it in the non-pregnant conditions. In other words, if she has had in the past a broken compensation from which she has partially recovered or perhaps almost entirely recovered and she becomes pregnant, the question comes up as to whether to allow the pregnancy to continue or whether to terminate it. Our experience has been that it is best to terminate it. I also feel that if a patient breaks her compensation early in the pregnancy that it is usually unwise to let her go to term. When compensation is broken near term we are at times able to carry the pregnancy along and get a viable child. When compensation breaks at or near labor we find about the most successful outcome is in a labor without effort on the part of the patient and this we have been able to achieve in quite a number of cases by allowing the patient to have the first stage of labor in bed under morphin. When we find that the second stage is approaching or that the heart has been subjected to all the burden it can bear, we terminate the labor under an anesthetic. I even feel that it is sometimes wise not to allow the patient to have any labor at all, but to terminate the pregnancy by Caesarean section before the patient goes into labor. In three cases I have been able to do this by putting to sleep with morphin and then operating under local anesthesia, assisted in one case by gas-oxygen, in another by ether-oxygen.

"All my section cases have done very well. Their recoveries have been much more smooth than those allowed even the first stage of labor.

"We have had at the Brooklyn Hospital during the last year six cases of labor with broken compensation. In all of those cases the mothers lived; in all of those cases where the child was viable the child lived. One case was aborted early in the pregnancy—at the fifth month, by vaginal hysterotomy. The other cases were all terminated with forceps. The hearts were protected as far as we could possibly do so by keeping the patients at rest, giving them morphin, and forbidding any efforts. We find that those cases that go through labor do not do so well during the puerperium; the heart gives trouble. They are not strong when they get up. These patients have been followed since leaving the hospital and a heart class has been formed; they report back or the nurse on duty sees them at intervals in their homes if they do not report back.

"There is just one other thing in regard to heart cases that I would like to touch upon and that is this: I don't agree with the idea of aborting these cases. I feel that abortion is an indefinite and unsatisfactory termination. I think that if it is wise to interfere at all, it is often the part of wisdom to go further than abortion and I do not find that an abdominal operation is such a dangerous thing that we have reason to fear it. It is more satisfactory to terminate a pregnancy by an abdominal operation and remove the uterus at the same time.

"In regard to tuberculosis and pregnancy: we haven't so many statistics. We haven't seen so many cases recently and possibly, as the reader of the paper has said, we may be open to the criticism that we are not able to diagnose tuberculosis in its incipiency. I feel myself I'm not able to do so, although I make it a point to make a careful physical examination on every pregnant case. I realize the fact that the early diagnosis of tuberculosis is a very difficult thing, and, undoubtedly, we can get help from our clinicians in this respect if we are only suspicious of its presence and submit our pregnant cases to their inspection for aid in diagnosis.

"When to abort, when to prevent conception and when to terminate conception in tuberculous cases are very difficult problems to solve. Personally, I feel that the tuberculous woman should not have many children for many reasons. I do not think the tuberculous woman should propagate her species to any great extent. As it is, there are many factors which are tending towards deterioration in the race and if we bring weaklings into the world they are at a disadvantage in the struggle for existence. The old law of 'The survival of the fittest,' is a good law, although it may work a hardship on the individual. Secondly, from the point of view of the individual, I do not think it is a good thing for the tuberculous woman to have many children. It throws too much of a burden on her. She has all she can do to take care of herself. I feel she can have one or two children, but certainly no more. But when it comes to a question of interfering with pregnancy in the tuberculous case I maintain that abortion is not good treatment. I feel that these cases should be sterilized at the same time that the uterus is emptied. It is better to do this at one operation than with two. The second operation involves an added risk to the patient. Two cases have come under my care this year for this condition in which I felt justified in removing the uterus in both instances. One patient was suffering with incipient tuberculosis of the lungs and was sent to us from the Tuberculosis Clinic with a request for an abortion. I thought the matter over and finally said I would be willing to do a hysterectomy. This was done under gas-oxygen and the patient made as comfortable and as normal a convalescence as I have ever seen. In two weeks she was out of the hospital and was then sent away to the country and as far as I am able to find out, she has been very well since. That operation was easier on her than an abortion, because there was so little loss of blood, probably only a couple of ounces.

"In the second case the patient had a very slight lesion in the lung, but she had only one kidney. The other kidney had been removed during the past year for tuberculosis. She was between three and four months pregnant and she sought my advice and I told her I didn't think she should go on with the pregnancy. And in that case I also removed the uterus. She was done under gas-oxygen. There was no reaction and she made a perfectly normal convalescence. She does not have to worry any more about pregnancy. She has her tuberculosis but she doesn't have to fear pregnancy. If she had been aborted, the sword would still be hanging over her head, and I do not think that these cases should be worried. I may seem to be rather radical in this respect, but I think it is the best thing in these cases.

"In regard to the toxemias: I should not take them up at all from the laboratory or from the pathological point of view. We see a great many cases of toxemia of pregnancy in our hospital work. At the Brooklyn Hospital we had twenty-two cases which we classed as toxemia during the last year. Of those, 13 were primiparae; 11 were delivered at term; 3 before the period of viability. Now, it is rather interesting to note that 10 terminated spontaneously. In 4 only were inductions done. In 5 labor was terminated with forceps. One had a craniotomy on a dead baby. Vaginal hysterectomy was done in 2 cases. We formerly did more operative deliveries than now in the toxemias of pregnancy. Twenty-one mothers lived and one died. Sixteen babies lived. Three were delivered before the period of viability.

"Now, one type that we see is the fulminating type of eclampsia where the first symptom is the convulsion. If the patient had been looked over carefully oftentimes the premonitory symptoms, the high blood pressure, irritability, nervousness, .sleeplessness, tenderness over the epigastrium and the chain of symptoms you all know so well would have been discovered.

"The other type which we get is the kidney type where the diagnosis has been made early in the pregnancy. Those cases present quite a different clinical picture and I believe they can be treated differently. I used to be quite radical and operated on all cases when I saw them. However, I am now trying to differentiate the types and to determine what cases require immediate operation and what cases require medical treatment. It is a very difficult question to decide.

"These are some of the problems that we have before us on the obstetrical service and I hope that we will be able to get aid from the internist in the solving of them. For my own part, I wish that the internist would take care of the eclamptic cases himself."

Dr. Tasker Howard, closing, said: "As far as the foot-note is concerned, it is evident from the discussion that there is already a cordial coöperation between the medical man and the obstetrician in the care of these cases.

"I think that perhaps Dr. Hussey would agree with me in the matter of the general practitioner handling these cases if he had grasped the limitation which I put on it in the paper. The point which I made was this: The general practitioner knows the patient better than any one else. If he is a man of sound judgment he should be qualified to care for her through pregnancy.

"In answer to Dr. Cruikshank's question respecting the use of the term decompensation: I used that word in the sense in which Mackenzie defines it, 'limitation of the field of cardiac response.' It is an elastic term, and in this connection was meant to suggest such a degree of dyspnea, edema, etc., as to make the patient feel that she was sick."

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

JANUARY, 1917

STATED MEETING, JAN. 16, 1917

Retiring President, Dr. Ralph H. Pomeroy, opened the meeting by introducing Dr. Albert M. Judd, the new President. There were about 400 present. The meeting was called to order at 8:50 p.m., and the minutes of the previous meeting were read and approved.

Scientific Sessions.

Paper: "Recent Progress in the Treatment of Cancer of the Prostate, Seminal Vesicles and Bladder." (Illustrated by lantern slides.) By Hugh H. Young, M.D., of Baltimore, Md.

Discussed by Drs. Henry H. Morton and Walter B. Chase.

Moved by Dr. MacEvitt, seconded and carried, that the Society extend a standing vote of thanks to Dr. Young.

It was moved, seconded and carried, that the reports of the various officers and committees be accepted as published in the Annual Report for 1916.

Report of the Council.

As there was not a quorum of Board of Censors, no action was taken on application for membership.

Applications for Membership.

Applications for membership were received from the following:

Louis Blumenfeld, 817 Eastern Parkway; L. I. C. H., 1914; proposed by J. H. Ohly; seconded by Membership Committee; Jan. '17.

Charles Blomberg, 187 Hooper St.; L. I. C. H., 1905; proposed by R. S. Fowler; seconded by Membership Committee; Jan. '17.

Election of Members.

The following, duly proposed and accepted by the Council, were declared elected to active membership:

George Kornfeld, 1016 E. 13th St.; Cornell, 1913; proposed by I. D. Kruskal; seconded by L. S. Schwartz; Nov., '16.

By Transfer.

Sherwood M. Whitbeck, 678 St. Mark's Ave.; P. & S., N. Y., 1901; proposed by Columbia County Medical Society; Dec., '16.

The following report of the Chairman of the Attendance Committee was read:

The Attendance Committee was composed of Wm. Sidney Smith, Chairman, F. B. Pierson and Howard Lankworthy.

No meetings were held, but the Committee was present at the regular meetings of the County Society throughout the year.

The duties of the Committee consisted in attending to any details as assigned by the President of the Society, from time to time, and in attempting to lessen the noise and confusion in the lobby of the Society building during meetings.

This attempt was, in a great measure, successful and there was much less disturbance in the lobby than in previous years.

The methods employed were, first: placing curtains on the inner side of the glass doors separating the lobby from the lecture hall, so that those in the lobby could not see into the lecture hall and those on the platform were not disturbed by the members outside. Second: by turning out nearly all the lights in the lobby as soon as the meeting commenced and by requesting the members to go inside promptly. Third: by hanging a notice, especially lighted, in the lobby calling attention to the fact that the Society was in session and requesting those wishing to converse to go up to the library.

It is urgently recommended that steps be taken to lessen the noise caused by the banging of the outside door and the rattling of its glass panels—a pneumatic door closer is not allowed by the fire underwriters—this door, however, has double hinges and it would be possible to remove the stop and let the door swing both ways, eliminating the noise.

Respectfully submitted,
WM. SIDNEY SMITH, Chairman.

The following communications were read, but no action taken:

Jan. 14, 1917.

Albert Martin Judd, M.D.
375 Grand Ave.,
Brooklyn, N. Y.

Dear Dr. Judd:

May I ask you to announce to the members of the Kings County Medical Society the symposium on "Oral Sepsis and Systemic Sequelae," upon which subject a paper will be read at the King's County Dental Society, by Dr. Leon Louria and discussed by Drs. J. M. Van Cott, Dudley D. Roberts, J. C. Rushmore, M. I. Schamberg, A. H. Merrit, R. Rietmeiller, and B. B. Machat.

The meeting will take place at the Masonic Temple, Lafayette Ave., Brooklyn, on Thursday evening, February 8th, at 8 p.m.

The Kings Dental Society extends a cordial invitation to the members of the Kings County Medical Society to come and participate in the discussion of this great subject: one in which the physician and the dentist are commonly interested.

Very truly yours,
Signed, Bertram B. Machat.
44 Court St.,
Brooklyn, N. Y.,
Jan. 12th, 1917.

Medical Society, Kings Co.,
1313 Bedford Ave.,
Brooklyn, N. Y.

Gentlemen:

The Special Joint Legislative Committee on the Habit Forming Drug Situation will hold one of its final hearings in the Borough of Brooklyn, on January 19th, at 3:00 p. m., in the Court Room of the Appellate Division, in the Borough Hall, Brooklyn,

It is the desire of the Committee to obtain practical suggestions with a view to introducing adequate legislation covering this situation. We would appreciate it very much if you will have a notice of this public hearing placed on your bulletin board and advise by letter or otherwise all the members of your Society who may be interested in this situation and desirous of appearing at such hearing. We would especially like to have the President and Secretary of your Society present at such hearing, in order to give the Committee the benefit of their views.

Very truly yours,
Signed, Geo. B. Brennan,
Member, Special Joint Legislative
Committee on Habit Forming Drugs.

The President appointed as members of the Medical Economic Committee Dr. John J. Masterson, Chairman, Dr. P. A. Spain, E. O. Darbois, Rollin Hills, H. G. Webster, L. N. Anderson, A. E. Gilmartin.

The Publicity Committee: John C. MacEvitt, Chairman, A. C. Jacobson, J. M. Van Cott.

Meeting adjourned at 12:15 p. m.

Chas. E. Scofield,
Secretary.

REPORT OF THAT PART OF THE PROCEEDINGS OF THE JANUARY, 1917, MEETING OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS RELATING TO THE CHARGES PREFERRED AGAINST DR. THOMAS DIXON FOR UNETHICAL CONDUCT IN THE MATTER OF ADVERTISING IN THE TELEPHONE DIRECTORY AND WRITING AND CAUSING TO BE SENT OUT TO THE PUBLIC A BOOKLET ON THE CARE OF THE EYE.

THE PRESIDENT, ALBERT M. JUDD, M.D., IN THE CHAIR.

Upon the conclusion of the scientific session, the President announced that the next order of business would be the consideration of the findings of the Council in connection with the charges which had been preferred against Dr. Thomas Dixon.

Dr. J. Richard Kevin made the following motion, after the report of the Council on the charges had been read.

"I move you that we resolve ourselves into a Committee of the Whole for the purpose of putting this question before the Committee of the Whole."

By the Chair: "The question now before the House is that we resolve ourselves into a Committee of the Whole. What is your pleasure in the matter?"

The motion made by Dr. J. Richard Kevin being regularly seconded and carried, the Chair said:

"Dr. J. Richard Kevin is appointed Chairman of the Committee of the Whole."

Upon assuming the Chairmanship of the Committee of the Whole, Dr. Kevin said:

"The Committee of the Whole being resolved, the Secretary will present to the Society the findings of the Council on this question. I guess it isn't necessary to read those again as you have all heard them before."

At this point Dr. Robert E. Coughlin arose and said:

"I have here a brief which I would like to present in this matter." The Chair deferred this until later discussion.

Dr. Thomas Dixon arose and said:

"I arise to a question of personal privilege. As an accused member it comes under that head. I think that the members before considering this question should hear from my side—hear something from me. I do not see how they intelligently decide or vote on this question unless they know my side of it. As an accused member, I think that I should be allowed such liberty as is consistent with parliamentary law, and in parliamentary law they allow a large amount of liberty to an accused member."

In reply to this, the Chair said:

"The Chair has so far not refused you anything, so I don't see where personal privilege comes in. So far as you are individually concerned, you are going to have every privilege to present your case to it. The object of the Committee of the Whole is to open this in full discussion."

By Dr. Thomas Dixon:

"Will you kindly inform me when I may have the time to speak?" To this the Chair agreed.

There being a demonstration at this point by some of those present in favor of Dr. Dixon, the Chair said:

"This is a Committee of the Whole to consider this question. The Chair will protect Dr. Dixon and every other member here, their rights and privileges." (Applause.)

Dr. Albert M. Judd arose and said:

"We have here a statement of the Society's attitude in this matter. I move you, sir, that that be read for the benefit of the Society members present, after which proceeding Dr. Dixon may be heard.

By the Chair: "I think, Dr. Judd, we can have that read without a motion. Will the Secretary please read the communication referred to?" This was done, after which Dr. Elias H. Bartley arose and said:

"In order to bring this matter properly before the Committee, I move that the recommendations of the Council be adopted." This motion was regularly seconded and carried.

By the Chair: "You have heard the question. Are you ready for the question?" After the Society had signified that it was ready for the question, the Chair said: "The Chair recognizes Dr. Dixon."

Dr. Dixon arose and said:

"Mr. Chairman, Ladies and Gentlemen:

"As a member of twenty-five years' standing in this Society, I naturally feel distressed at my position, but I am comforted by the reflection that I am innocent of placing any blemish upon this Society or upon the medical profession.

"I wish to say that whenever I have been before the Council of this Society there has been always a good feeling as far as I could discern, and I don't question their personal honor nor their integrity. It is only a question of policies that we do not agree upon.

"For the past five years I have spent considerable time and some money seeking to find some scheme, some device by which our profession could be extricated from its deplorable economical condition, and while I feel regret that the Council should not have notified me to present this desire before taking such extreme action, nevertheless I am glad to be able to present it to you regardless of the delicacy of my position to-night.

"Now, in that little book that I wrote you will notice from the reading of the same, that I told nobody that I could do any service better than they, and I did not say that I would do it any cheaper than the recognized price for such work."

Interruption by the Chair:

"Doctor, you must keep to the question. We are not discussing your pamphlet. That is not the evidence, whether you have written it or not. We are not here to discuss the reasons for your having written that; that is not before the house. The question is as to whether you are guilty of these charges or whether you are not."

By Dr. Dixon:

"It seems to me, under the circumstances, that it is pertinent to—in regard to what is in the book—in regard to my case. I simply desire to tell the Society what induced me to write this book and want them to understand that I had no intention—

Interruption by the Chair:

"The Society isn't interested in the publication or cause of the book. It is the book itself."

By Dr. Dixon:

"An accused member is under a special privilege and I will be as brief as I possibly can and I will try not to be like that minister down South who was a very good minister, but didn't know the stopping-off places in the sermon, and if I do not know the stopping-off places I will be glad to have you tell me so.

"I want the members to understand—to know what actuated me in writing the book."

Interruption by the Chair:

"This is impertinent. You must bring in nothing but pertinent evidence in the case."

By Dr. Dixon:

"In regard to the advertisement in the telephone book: the Optometrical Society was spending thousands of dollars in putting deceptive advertisements in the press. I put that advertisement in the telephone book to counteract that matter. When I stopped that advertisement I took that out of the telephone book. I think that is doing a work for the people and also for the profession. (Laughter.) Now, gentlemen, I am under charges here under a section of the ethics (referring to the ethics of the A. M. A.): you have had this read to you. I believe firmly that that has been done for the best of the profession, but there is a great flow of words in many parts that some of the members may find difficult of interpretation. They are like laws that are enacted. Lawyers disagree on their interpretation, wise lawyers. There has to be a learned judge that interprets the law. Now, they say here in the ethics—they say in conclusion:

"'While the foregoing statements express in a general way the duty of the physician to his patients, to other members of the profession and to the profession at large, as well as of the profession to the public, it is not to be supposed that they cover the whole field of medical ethics, or that the physician is not under many duties and obligations besides these herein set forth. In a word, it is incumbent on the physician that under all conditions, his bearing toward patients, the public and fellow practitioner should be characterized by a gentlemanly deportment and that he constantly should behave toward others as he desires them to deal with him. Finally, these principles are primarily for the good of the public, and their enforcement should be conducted in such a manner as shall deserve and receive the endorsement of the community.'

"What I have done I can assure you has received the endorsement of the layman. (Laughter.)

"Now, gentlemen, we come to Section 4. You have had this read to you. At the end of this section it says: 'It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients.' Why, gentlemen, all of you could be found unethical for simply putting out your signs under that without doing anything to gain the attention of the public for the purpose of obtaining patients. Now, the ethics weren't meant to be taken absolutely technically, because if they were so I believe we could all be found unethical. (Stamping of feet at this point of the doctor's remarks.) (Chair rapped for order.)

"Now, gentlemen, I claim that I am not unethical in this matter. Under Chapter 3, Section First, it says: 'Physicians, as good citizens and because their professional training specially (Dr. Dixon read "especially") qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interests of humanity. They should co-operate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on subjects relation to * * * public hygiene * * * .' Hygiene means health. I have, in that little booklet—I have counseled the public on the health of the eye (laughter); yes, sir, I have.

"Now we go on to 'Public Warned' (this is in the same chapter, Section 3), 'Physicians should warn the public against the devices practiced and the false pretensions made by charlatans which may cause injury to health and loss of life.' I did that in the telephone book, in my advertisement. I warned the public. I warned the public to look out.

"Now, gentlemen, we don't want to make our profession ridiculous; we do not want to make ourselves ridiculous. I'm going to bring to your attention what you call a roundabout advertisement; that is, collective advertising, and you must remember that a collective offense is no different from an individual offense—not in law. The directors of a bank are individually held responsible for what they do; so are corporations. I put this up to you gentlemen because if I am guilty of unethical conduct, why others are equally guilty with me. You should not make fish of one and flesh of another. Here are nearly one hundred clippings from newspapers extending from Texas to the Canadian border, from New York State to California. They were printed mostly in January of 1914. It was describing the American College of Surgeons. Gentlemen, the American College of Surgeons, as stated in those clippings, are of very high ethical standard. They must take a pledge even to be ethical. In many of these clippings is the full name of the members of the American College of Surgeons. Gentlemen, I would like to call your attention to another thing. We have, on September 3rd, 1916, in the 'Daily Eagle,' an article 'Surgeons divide fees with doctors who send patients. Reputable members of profession take action to stop this practice. Little in Brooklyn—Little in Brooklyn.'"

Interruption by the Chair:

"You have the privilege of bringing charges against any other man in our Society for unethical proceedings. You have no right in your own case to bring charges in your remarks now against anyone else. You have that privilege in this Society the same as I have and as every other doctor, but the Chair will rule that you should not try other members here to-night; we haven't the time."

By Dr. Dixon:

"Mr. Chairman, I'm but commending them; I'm not condemning them." (Laughter and applause.) (Audience called to order by the Chair.)

By the Chair:

"I will give him every liberty, but no license. You will go about this thing with every common sense and bring in no questions not pertaining to this. Dr. Dixon, notwithstanding this applause which you have received you will confine yourself to the question at issue. Proceed."

By Dr. Dixon:

"I'm not soliciting any applause, but this matter pertains to my position, to my guilt. The members of the Society to vote intelligently on this matter should know whether others—"

By the Chair:

"There is no other case before us to-night but your case, sir, and because you find others guilty of the same thing is no reason why you should try to inject that into this case. We are not trying the other men to-night."

By Dr. Dixon:

"I'm not condemning those men; I commend them. (Laughter.) Well, I have some information here that I was to give along the same lines I am speaking about, and I say it is important for the Society to know it in order to judge my case, and while with all due respect to the Chairman—."

Interruption by the Chair:

"You will not be permitted to defend your case by other cases. There is no need of trying to get around the bush by that method, sir. Do not take any advantage of the Chair."

By Dr. Dixon:

"I'm not taking advantage of the Chair. It is by comparison that we learn."

By the Chair:

"We do not want any comparison; we are here to try the case. Proceed."

By Dr. Dixon:

"There were 90 members of the College of Surgeons—."

At this point the Chair called Dr. Dixon to order and instructed him not to bring in anything in his remarks which was not pertinent to the case, whereupon Dr. Dixon said:

"Then I appeal from your decision."

By the Chair:

"The question is on the appeal from the decision of the Chair."

A motion was regularly made to sustain Dr. Kevin in the matter of the appeal, which motion was regularly seconded.

By the Chair:

"The question is on the adoption of the methods, or rather on the question of the appeal. Those in favor of sustaining the Chair signify by saying 'I'; those against 'No."

The Society sustained the Chair, there being but three present voting "No," whereupon the Chair said:

"The Chair is sustained. Dr. Dixon, proceed."

By Dr. Dixon:

"It is not that way; it sounded that way. Mr. Chairman.

"Now, gentlemen, in all my activities they have simply been that I believe that it is a duty of the physician to educate the public in health matters. In none of the matter I have put forth have I put forth anything deceptive. I do not believe in it. I believe there is no harm in what I did, gentlemen. What I am up against is this: Here is the eye-testing opticians; they are permitted to do advertising freely and I am to sit quietly there and allow this to go on and never make a single effort to get the business? There is nothing so foolish or further from reason. You gentlemen are up against the same thing."

Continuing further along this line,. Dr. Dixon referred to the activities of such things as Christian Science with its daily newspaper, its monthly publications and its reading rooms in this city, to osteopathy with its monographs which are printed by the millions and sold by the thousand to the practitioners for distribution to the laity, to chiropractice which is permitted to advertise untrammeled, and, lastly, to the activities of the naturopaths in this respect.

"Now," he said, "they take away thousands and thousands of patients from you gentlemen annually. Still, you have something better than they have to put up and still you sit by quietly and allow them to walk away with it."

By way of further supporting his contentions, Dr. Dixon cited a medical journal in the matter of advertising, and in concluding his remarks said:

"I do not ask any member to vote on a personal basis. I simply want him to use his discretion in this matter, according to the way his judgment dictates, but I have enough regard for my profession and for this Society not to feel that they do not wish to go on record in this matter, that it is not the thought or the desire to go on record that it is against teaching the public health matters.

"Gentlemen, I thank you for your attention, Mr. Chairman and Ladies."

The Chair then granted the privilege of the floor to Dr. Robert E. Coughlin, who presented the following brief (already prepared in full) on behalf of Dr. Dixon:

Brief presented by Dr. Robert E. Coughlin, 428 47th Street, Brooklyn, N. Y., on behalf of Dr. Thomas Dixon in the charge preferred against him for unethical conduct in the matter of advertising in the telephone book and sending out to the public a booklet on the care of the eye.

"Mr. Chairman, Ladies and Gentlemen and Members of the Medical Society of the County of Kings:

"I offer no apology for submitting this brief for the reason that my main or principal reason is to see that no injustice or harm comes to any man.

"In the words of the great Dr. Johnson: 'I hate a fellow whom pride or cowardice or laziness drives into a corner and who does nothing when he is there but sit and growl. Let him come out, as I do, and bark!'

"In the first place, I wish to make the statement that every physician or surgeon who attains eminence or who amounts to anything advertises or is advertised directly or indirectly. Medical articles appear in the medical journals and these articles are read by professional and lay readers. If they are of sufficient general interest they are re-printed in part or *in toto* in the newspapers. In this way the doctor advertises himself and is advertised. He solicits patients 'not warranted by personal relations.' A doctor attains eminence. A dinner is given in his honor. A 'write up' appears in the newspapers with the photograph of the distinguished physician or surgeon who has rendered very, very valuable service to suffering humanity."

By the Chair: "You are not trying anyone else here. You must keep to the question the same as I told Dr. Dixon, Dr. Coughlin."

By Dr. Coughlin (Continuing): "Doctors on hospital and dispensary staffs are advertised in the newspapers. This is either direct or indirect advertising. You may call it what you like but it is advertising nevertheless. No article on any hospital or dispensary appearing in a newspaper is ever complete without the names of the doctors on the staff. Very often their addresses are given and always their special lines indicated.

"Dr. Thomas Dixon, of 367 Fulton Street, Brooklyn, N. Y., a graduate of the Rush Medical College, class of 1889, has had charges preferred against him by one or more members of the Medical Society of the County of Kings. It is charged that he wrote a small pamphlet for general distribution and advertised on eye strain in the telephone directory.

"Dr. Dixon has for years maintained membership in this society. He has been a member of the staff of the Brooklyn Eye and Ear Hospital, the representative hospital in Brooklyn for the diagnosis and treatment of eye and ear diseases. He has also been attending ophthalmologist to the Samaritan and Zion Hospitals and surgeon to the Brooklyn, City and New Utrecht Dispensaries. On this record he has a standing in the profession.

"At a meeting of the Council he was given a form of trial which he claims was no trial, and it was recommended that he be expelled from society membership. The Council acted according to the following By-Laws" (reading extracts from the Constitution and By-Laws of the Medical Society of the County of Kings, Chapter XVII, entitled "Ethics and Discipline," Section 2):

"'The Society may admonish, suspend or expel any member for disreputable conduct or violation of its rules or dignity, or for any conduct against the general character or well-being of the medical profession, provided that at least one month's notice of such action has been given to the members, and such action shall require the affirmative vote of two-thirds of all the members present when recommended by the Council * * * .'

"I would call your attention to the last Section (7), which reads as follows:

"'After the investigation of charges the Council may, at its option, drop them, or report them to the Society and recommend some definite action thereon.'

"I object most emphatically to the expulsion of Dr. Thomas Dixon from membership in the Medical Society of the County of Kings for several reasons:

"First, we do not know the motives which actuated the charges against a member. Were they personal or for the good of our profession or the society as a whole, or entirely altruistic?

"Second, the Council has rendered a decision on an old law, almost five years old, which was borrowed from the ethics of The American Medical Association. It reads as follows:

"You have heard it read. It isn't necessary to go over it.

"The correct interpretation of this law of ethics would mean that no physician or surgeon acting professionally should teach or write anything on any medical subject of general interest 'not warranted by personal relations.' I believe that the public should be informed on matters of general interest through newspapers or by reprints. The word 'doctor' is derived literally from the Latin word 'doces,' to teach. Therefore, a very important duty which the doctor owes the public is to come out and teach the public in all matters appertaining to the public health. The recent epidemic of poliomyelitis shows how necessary it is for doctors to come out and teach the public generally how to live and prevent the disease and what to do when the little children are attacked. Tuberculosis is another disease which the public should be instructed to understand—."

By the Chair: "You will keep to the text of Dr. Dixon's trial and not go into subjects that do not pertain to this question, sir."

Replying to the Chair, Dr. Coughlin said, "This pertains directly to the question at issue." Continuing with his brief, the doctor went on as follows:

"Cut out interviews or solicitation of patients by interviews and it would be impossible to communicate information to the public on health topics. It would be unprofessional to give lectures on health in our public schools. It would be unprofessional to advise the public in the newspapers on matters of public health. No solicitation of patients by books on 'How to care for children' and 'How to get strong,' 'The athletic life,' 'Old age deferred,' 'Why should people go insane?' etc.

"Living up to this by-law on ethics would eliminate the 'How to Keep Well' column in our local paper by a very able and well-known member of our State Society, which is really the parent of this society."

By the Chair: "Time up."

By Dr. Coughlin: "Then I appeal from the Chair temporarily to go on with this."

By the Chair: "There is no appeal from the Chair. We have about 200 men who have the privilege of speaking and your time is up, sir."

At this juncture there was a demonstration by some of those present that Dr. Coughlin be permitted to continue, and Dr. Ralph H. Pomeroy moved that the doctor be given an extension of time. This motion being regularly seconded and carried, the Chair inquired as to how much further time should be given to Dr. Coughlin and it was decided that it be unlimited, whereupon Dr. Coughlin continued and said:

"Living up to this by-law would prevent our well-known and eminent internists from writing magazine articles and holding newspaper interviews on all subjects they are interested in along medical lines.

"Third, it would eliminate all reprints for general distribution.

"Fourth, advertisements or cards by physisians and surgeons especially announcing special lines in newspapers are common in certain countries and in certain parts of this country. In all the foreign newspapers published in this country advertisements of practitioners in good standing in their county societies are common. (See Norwegian papers, of these the 'Undisk Tidende,' also the Swedish paper, the name of which I cannot pronounce.)

"Fifth, doctors in good standing and members of The Medical Society of the County of Kings do advertise in large type in Polk's Medical Register and Directory of North America (R. S. Polk & Co. publishers) at $2.00 a year. This directory is in general circulation and can be consulted in any large library or any medical library and can be bought by anybody who wishes to pay the price.

"Sixth, eye strain and eye diseases are subjects of general interest and, therefore, Dr. Dixon's modest little pamphlet could do no harm, but probably would do a lot of good inasmuch as it would suggest to the patient or the public that eye strain must be recognized early in order that more serious conditions might not set in as the result of prolonged eye strain. Advertisements along this line can do no harm, as oculists can cure eye strain by the use of properly fitting glasses.

"Dr. Dixon's advertisement are always, first and last, along the line of instruction to the public on how to detect eye strain and what to do when eye strain is present.

"Instead of acting upon the recommendation of the Council to expel Dr. Thomas Dixon from society membership, I would recommend that the charges against him be dropped and that the By-Law, Chapter II, Article II, Section 4 (the doctor was referring to the 'Principles of Medical Ethics of the American Medical Association'), 'Solicitation of patients by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations, is unprofessional,' be expunged from the By-Laws of the Medical Society of the County of Kings for the reason that it is against progress in medicine and diametrically opposed to our present attitude of regarding medical matters of general interest.

"For the above reasons I shall oppose Dr. Dixon's expulsion. Dr. Dixon has done good work as an organizer and your Society is about to have a department of economics. Remember that Dr. Dixon was the prime organizer of this league in Brooklyn and we all have to acknowledge that this organization has done good work in the interest of the medical profession in Brooklyn and New York State. Dr. Dixon is a man with vision. He believes he is right in what he does. He is trying to make an honest living in the practice of his profession. He believes a man in the medical profession is compelled to keep himself before the public in order to survive. I believe that he is sincere and honest in his convictions and I appeal to you gentlemen in his behalf, in the name of scientific progressive medicine as we see it to-day in contradistinction to what it was three, four or five years ago. Times change and so should medical ethics. A society may be on the verge of expelling a member and by a change of attitude light may penetrate where there was little light before.

"Conclusion: We should be very careful in dealing with and judging our professional brothers.

"We should be honest, kind, sympathetic, forgiving and charitable.

"We should do nothing that will in any way break a man's spirit, but should give him every chance.

"We should have respect for his opinions, especially when they are along the lines of progress.

"The world moves, and so will medical ethics, away from ultra-conservatism.

"I appeal to you, Gentlemen of the Jury, in the name of scientific medicine, in the name of suffering humanity, in the name of justice, in the name of right to decide against the recommendation of our worthy Council and in favor of Dr. Thomas Dixon because he has the courage to come out in the open and teach the public how to detect eye strain and thus prevent its innumerable miseries and how to cure the condition by the use of glasses properly fitted and properly applied."

By the Chair: "Is there anyone else who would like to speak from the other side of the question?"

By Dr. Henry A. Fairbairn:

"Do you desire comments from the last speaker's viewpoint, in favor of the defendant? (Dr. Fairbairn was informed that the Chair wished to hear from the other side of the question). Then, I desire, sir, to speak for the enforcement of the law. Mr. President, there is no objection under God's heaven if this man wants to send out his booklets or put his advertisement in the public sheet as long as he is not a member of the Kings County Medical Society. We tell him distinctly when we bring him into our pale, that this isn't the way we do things, and we say, 'My friend, if you do things that way, why, then we will have to part company.' It looks to me this way: the gentlemen has expelled himself. It is simply up to the Society to put on their stamp of approval, that's all. We put our stamp of approval on his suicidal act. If you allow Dr. Dixon from his office there in the Arbuckle Building to govern the Kings County Medical Society we might just as well abandon discipline and disband. His methods are not our methods. That is all we will say to Dr. Dixon. Now, suppose Dr. Dixon sees fit to say, 'I will abide by your law and will stop this thing,' then he can be reinstated and we will be glad to do it, but it would be an anomaly to allow a man to defy our Council and our laws and defy our Constitution. It is an anomaly. He is either with us or against us. I think, sir, the gentleman has expelled himself and it simply remains for us to put on our stamp of approval."

By Dr. Dixon:

"Undoubtedly Dr. Fairbairn is right, but I want you to think seriously about this. This is one of the largest medical societies in this country and it is supposed to be the exponent of medical thought and medical policy. Is it expedient? Is it expedient for you to decide to throw a member out on this question? I desire to call your attention to the fact, Mr. Chairman, that Dr. Young, who read the paper here, occupied over an hour, but when one member got up to defend me you limited him to five minutes."

By the Chair:

"You are particularly unfair to the Chair. The Chair took into consideration all these members here and asked that the debate be limited to five minutes, and hearing no objection, the Chair decided to limit the discussion to five minutes. It is unfair to make a remark of that sort.

"Are there any other remarks regarding the question?

"Now, the question is on the adoption of the recommendations of the Council of the Society. Are wou ready for the Question?" (Cries of "Question, question" by some of those present.)

The Committee of the Whole then adjourned to resolve itself into its original body, after which Dr. Albert M. Judd, President of the Medical Society of the County of Kings, assumed the Chair and Dr. Richard Kevin presented the following resolution:

"I move that we resolve ourselves into our original body, the Society."

This was regularly seconded, the President stating: "It is regularly moved and seconded that we resolve ourselves into the original body, the Society. The recommendation of the Committee of the Whole you have all heard."

By Dr. Richard Kevin:

"As Chairman of the Committee of the Whole I desire to present to you the recommendations of the Council and I move the adoption of the recommendations of the Council."

This motion was regularly seconded and carried.

By the Chair:

"The vote will be taken by roll call and each member answering shall stand."

By Dr. William Browning:

"I would like to ask for a secret ballot if it is possible to do so."

By Dr. J. Richard Kevin:

"To make this a legal matter and to facilitate things it should be a roll call." The Chair then directed that the vote be by roll call.

By the Chair:

"I wish to instruct the members to answer the roll call if they are present, otherwise we have no method of knowing whether they are present or not, and if they do not answer they will be marked absent."

Dr. Thurston H. Dexter arose when his name was called to vote and said:

"I desire to vote No and wish to explain my reason for so doing. It seems to me that there are two questions to decide. One is as to whether Dr. Dixon has infringed on the rules of medical ethics, and it seems to me that there is no question about that; and the other question is as to whether Dr. Dixon has been given the same rights and privilege in this Society that other members of it have, and I think the evidence which was introduced here to-night and was ruled out of order indicates that he has not been given the same rights and privileges as other members of this organization, and I think that that material which we did not hear to-night is a greater indictment against the Council of this Society than any indictment against Dr. Dixon. For that reason I desire to vote No."

By the Chair:

"There is only one question before the house and that is the question of the adoption of the action of the Committee."

By Dr. J. Richard Kevin:

"The man has no right to explain his vote after the roll call has started. He can before, but not after."

Result of roll call: 164 in favor of expelling Dr. Thomas Dixon from membership in the Society on the charges preferred against him and 11 against expelling him.

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"THE ETIOLOGY OF EPIDEMIC POLIOMYELITIS."*

ILLUSTRATED BY LANTERN SLIDES AND SPECIMENS.

E. C. Rosenow, M.D.

Rochester-Minn.

As many of you, no doubt, know, I have been interested for some years in a study of the peculiar infecting powers that certain microorganisms may have at the time that they are isolated which they soon lose on artificial cultivation.

Heretofore all of us have associated peculiar infecting powers of bacteria with peculiar kinds of bacteria. The typhoid bacillus does a certain thing; it causes typhoid fever. The meningococcus causes meningitis, etc. We have known for many years that streptococci, for instance, may be the cause of various diseases. We have streptococcus endocarditis. We have rheumatism, which is unquestionably a form of streptococcus infection. We have pneumonia which is, in the broad sense, a streptococcus infection and has been so proven. We have the streptococcus of blood-poisoning with its characteristic lymphangitis, etc. We haven't realized, however, the presence of streptococcus infections in a whole series of diseases which are of low virulence in which many investigators have considered them when found to be accidental invaders and not of great importance.

By the use of special methods and the gross application of animal inoculations to the disease at hand I have been able to show that in a large series of diseases, such as rheumatism, chronic infectious endocarditis, erythema nodosum, herpes zoster and others, and through the stomach, appendicitis and cholecystitis; in all of these various diseases there were present in the involved tissues streptococci that when injected and grown under proper conditions and injected intravenously into animals, tended to localize in the tissue from which it was isolated; and, moreover, a continuation of the study has shown that in all these diseases this property of streptococci which may be isolated from the tonsils, teeth or other localized foci of infection would do the same thing. In the last year I have been interested particularly in a study of the relation of infections in and about foci of teeth, tonsils and other infections to various diseases of the nervous system and in that study, experimenting with patients suffering from transverse myelitis, I have been able to isolate a form of streptococcus. I should preface these remarks by saying that I was interested in the question of determining whether it was a streptococcus or not, and then the problem in the investigation was to find out whether the various foci of infection considered as chronic and more or less harmless might not have a relation to the disease at hand, and the technic was so devised that anything I could grow from the material obtained from these various foci of infection, whether staphylococci, bacilli, or streptococci (I cared not), was used. Is there present in these various foci of infection something that will tend to localize in the tissues similarly to the disease that the patient may have? I have, for instance, in a case of transverse myelitis, aspirated material from about the pus pockets of the only seven teeth that the patient had left (all of which were loose) and I have injected that material obtained from the pus pockets of this particular patient into animals with the result that they have come down with transverse myelitis, and the cord of the animals has shown the presence of hemorrhages, both in the gray and in the white matter. I have also cultured some of the material expressed from the patient and it continued to produce paralysis, showing at autopsy that lesion throughout the cord, in the gray and white matter. This I have been able to do not in rabbits alone, but also in guinea pigs and in dogs and in cats, so that the question of having at hand something that was very different from anything I had worked on before was certain. In this patient the myelitis began following an attack of fever of unknown origin. It was thought at first to be a case of typhoid fever, but because the symptoms of the disease did not run the course of typhoid fever afterward, it was decided by the neurologist that the case was one of infectious transverse myelitis, the nature of which was not known, and eight weeks after this thing occurred the paralysis had come to a standstill.

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*An address delivered before the Brooklyn Pathological Society Nov. 8, 1916.

I may cite a case of multiple neuritis which appeared during the grippe epidemic a year ago following an attack diagnosed as grippe. This patient developed neuritis and when first seen was suffering intense pain and had an eruption which has lasted three months and is improving very slowly. There was a gradual return to normal with disappearance of the pain. Material was expressed from pus pockets around the teeth of the patient and from pus pockets in the tonsils, which upon being injected into animals resulted in the production of symptoms similar to those manifested by the patient. Some of the animals showed drop foot and lesions of so striking a character that I doubted the accuracy of my observation. In about a week, however, I repeated the observation with the same patient, made cultures and isolated this particular organism from the blood of the injected animals which also developed peripheral neuritis. I should have stated that it was determined that this patient's disease was undoubtedly peripheral neuritis.

Similarly some cases of multiple sclerosis have shown bacteria isolated from foci of infection of patients in animals experimented with, chiefly in the posterior gray matter of the cord; and I have one case of sporadic poliomyelitis, a typically classical case of flaccid paralysis of both arms, occurring in a patient twenty-one years old, which came on rather suddenly after a period of two days' indisposition, slight fever, some headache, but with no definite illness—no known cause. From this patient I was able to express pus from the tonsils, cultures of which when injected into animals produced flaccid paralysis, chiefly of the anterior extremities, and again in that case we were able to prove beyond a doubt that these things determine exactly what causes the paralysis—an elective localization of the bacteria, etc., and we were able in that case to eliminate as nearly as we could the presence of the so-called virus of epidemic poliomyelitis. In other words, in this particular patient there was evidence pointing in the direction that the paralysis (in this case a sporadic anterior poliomyelitis) was not due to the virus of epidemic poliomyelitis. The lesson that we can draw from that is that the conclusion which men who have worked on epidemic poliomyelitis have drawn that epidemics may spread or may begin from sporadic cases, or that a sporadic case of poliomyelitis may be the cause or the start of an epidemic, seems unwarranted in that particular case. In other words, here was an example of a patient presenting the clinical and pathological picture of sporadic anterior poliomyelitis, flaccid paralysis of the arms, classically a case of sporadic anterior poliomyelitis, which was due apparently to an ordinary looking staphylococcus that had peculiar infecting powers that localized in the anterior horns in the central nervous system of animals beyond any question of doubt. That was proved. There can be no argument on that point. It is not open to argument because it is a fact.

At that time I didn't dare believe that in epidemic poliomyelitis it was at all likely that some cases of paralysis might be due to something besides the virus that had been worked out by Flexner and Noguchi and others of our co-workers.

A period of almost a year elapsed before the present severe, widespread epidemic of poliomyelitis was ushered in upon us. I had been reading about the manner in which this thing had spread, of its occurrence in isolated instances, often far away from cities, far away from any apparent source of infection, appearing in outlying districts, the fact that epidemic poliomyelitis had been found in years past to be chiefly a rural disease, the fact of its rapid spread, its occurrence in the summer months, etc., etc. Suddenly there appeared a case in a town near Rochester, Minn., which was brought in and I took courage and began to investigate the possibility that patients may often in epidemic poliomyelitis have bacteria in their throats, or in their tonsils, or where not, that we would consider as ordinary varieties that might have the power to localize in the anterior horn of the spinal cord and gray matter of the nervous system throughout and might be the cause of paralysis in some cases.

It has been proved that in epidemic poliomyelitis there is present a very small organism that is filterable and will produce poliomyelitis in monkeys. That point is settled and cannot be argued. There is no question about it. These things do happen.

In the very first case that we worked on we isolated cultures which were injected into animals soon after isolation and in the first injections we used the actual material I expressed from the tonsil, as well as cultures in the first generation without regard to what micro-organism might be at hand, and injected everything that grew. The result was that in the very first series of experiments we were able to produce paralysis in guinea pigs and rabbits. The same was true of the second series, cultures being made in the same way and again injected into animals. These cultures were made in the ordinary way and they don't at all develop the virus (the small organisms of Flexner and Noguchi). Again we were able to produce paralysis and again worked with those cases in Rochester and in each of these cases we obtained paralysis; but whether the paralysis so produced was poliomyelitis I did not determine; but I do know I had something which I had never seen before. I have injected thousands of animals with many diseases other than poliomyelitis, the technic pursued being very similar to that carried on in these particular experiments, and the result was that I had here something that I hadn't seen before, and it was present in unmistakable form. It was so evident that I couldn't drop it. I simply had to investigate the thing and find out what it meant. It was found that it was possible to make cultures in these cases in the same manner as in other diseases and produce flaccid paralysis, often limited it is true, but one could watch and observe the presence of symptoms which were very similar to those exhibited by patients suffering from poliomyelitis. There was noted a premonitory period of excitement and tremor of the muscles, and one could find present in the larger animals, especially in dogs, muscles that had become paralyzed. To disregard that was impossible. It simply called for investigation. It was a real nervous strain because these other facts had been established and proven beyond the question of a doubt that the cause of poliomyelitis was filterable and is due, or proven to be due to a small organism. Here were the facts and their meaning had to be determined, so I decided to come to New York in the present epidemic to obtain post mortem material, etc., in order to be sure that we were working with a real disease which resembled poliomyelitis; and it probably was.

I think I can best illustrate the further results obtained by the use of lantern slides, in which I want to show you a series of animals exhibiting paralysis and the lesions as far as we have gone that we have found in the spinal cord and central nervous system in general and the organisms in the lesions and the character and growth of the microorganism that we have been working with.

Remarks after lantern slide demonstration.

To sum up, a few additional facts may be noted. In every one of twelve or more autopsies on humans (babies from seven months old to an adult twenty-four years old) we have been able to isolate from the lesions in the brain, or cord, or from the brain and cord both, from the ganglia, or from the ventricular fluid this organism in the large form in which it has the power to produce paralysis, not only in the guinea pig and rabbit and dog and other animals, but also in the monkey. We have isolated the small form in most of these. In properly made cultures with Flexner's technic we have repeatedly isolated the small form in some instances in pure culture, but usually they have been mixed with a large form which we do not consider to be a contamniation as do Flexner and Noguchi. In the light of experiments which we have carried on I consider these large organisms significant.

We have isolated this organism from the brain and cord of paralyzed monkeys, the medium causing the paralysis being a standard emulsion of brain and cord from patients dying of poliomyelitis, and we have been able to produce paralysis by injecting glycerinated monkey virus in the fourth monkey passage. We are able to isolate in monkeys paralyzed in this way the small form, and by perfecting and using a technic more accurate than that which was used at first we are able to get the small form more often than we did in the beginning, but the large form we do not consider, as I've already said, to be a contamination when it is found. So we can say we filter it only when we grow it from the brain. I mean we are able to filter and get the culture from the emulsion of the brain of animals that have died of paralysis. We are able to filter and obtain the growth from cultures in which we grow the small form. With the type of filter that I have used we are not able to filter the large form. If we take a culture which contains only the large form and attempt to filter that we get nothing. If we take that same culture and grow it down small and filter it we get our organism, but not in the small form only; we usually get back both large and small.

To sum up, I think that we have been able to prove that there is present in the throat, in the tonsils and in abscesses in tonsils and also in the central nervous system of patients with poliomyelitis a form of streptococcus that looks quite ordinary but that has a peculiar infecting power, in that it will tend to localize in the central nervous system of animals; a form of streptococcus that is of low virulence, that doesn't usually kill the animal by an overwhelming infection, but by respiratory failure. We think the paralysis that we have demonstrated in the tissues is due to an organism that we have isolated and reproduced and isolated again as high as the fifth animal passage, an organism which under proper conditions we can plate out, an organism which under proper conditions still holds its infecting power, eliminating absolutely the carrying over of virus as the cause of paralysis in our animals and producing paralysis in animals found to be insusceptible to the virus of poliomyelitis (as has been worked on) and insusceptible to cultures in the small form. In other words, it looks to us as if we have in poliomyelitis to deal with a streptococcus infection; in the broad sense, a form of streptococcus that is peculiar in some respects, but the peculiarity consists chiefly in its infecting power and in its growth in the central nervous system, continuing as an organism to grow small, and if maintained under proper conditions tending to continue to grow small; but if the conditions are made right it will grow large, and we have grown that peculiar property as high as three times. Filterable? Yes, we can make it filterable. It is apparently a question of size. The large form is only the small form become large. So our conclusion is that our results are in entire accord with what is already known and which has been previously established as to the etiology of poliomyelitis. There isn't any question about the presence of the small form. That has been proved, but remember that we are finding not only the small form, but also the large form. Other observers have characterized that as a contamination while we have not. We feel it is probably of equal importance. We find the organism in the central nervous system of patients dying of poliomyelitis when the blood is sterile.

(After referring to the question of filtering the virus of poliomyelitis through the Berkefeld filter, the doctor went on to say that it was essential to determine the meaning of these facts and the significance to be placed upon them. Continuing his remarks, he said:)

I didn't believe it would be possible to isolate the large form from the central nervous system. I thought we might be able to isolate it in a few instances, but we are getting it in 100 per cent of cases, not only in patients who have died of poliomyelitis, but also in every monkey that has died of poliomyelitis, so I believe that that is an important thing—a discovery of definite value.

I feel I have in my hands something that may immunize animals and that may enable me to obtain a serum that will be protective. That is the problem that is now confronting us.

I grant that there is ground for skepticims as far as the question of growing the large and small forms is concerned. I have satisfied myself, and if we are able to immunize animals and obtain a curative serum the controversy as to whether we can grow the large or the small form can go on indefinitely; it will make no difference.

Dr. E. C. Rosenow, in closing the discussion, said:

"I am very glad Dr. Libman brought up the question of transmutation. I don't altogether like the term, but we may call it transmutation. I don't consider it transmutation at all. The way it occurs seems to be quite different from the things which we consider characteristic of transmutation. I think the reason for their growing large or small is a question of nutrition. I do not believe, however, that that is of as much importance from our studies as we are continuing them, as is the question of oxygen pressure. It is the anaerobic condition that is apt to breed the small form, but in these cultures the greatest irregularities in size occur in dextrose free media, although in the dextrose media the cultures become old and we do not find very great irregularities, but it is in the dextrose free media that we get the small forms and irregularities of more marked character.

It is really a very striking fact that after three years of study of the small form of the organism of poliomyelitis there is no record of what it will do in a whole series of media. However, I am quite sure that those attempts have been made. I think probably they have been made by methods that weren't sufficient to yield the growth. It is true, however, that the two strains I was able to obtain have grown very well. With blood as a medium under aerobic conditions we have been able to get a fine growth. Under anaerobic conditions they are similar, but not entirely alike. With the organism with which we worked it is a fact that the strain producing paralysis in rabbits in the large form produces colonies indistinguishable from the strains we have worked with, but apparently identical.

"One more word regarding the question of largeness and smallness of size. I just said I grant the possibility that we are doing this even when we plate out; I will grant that we may carry over repeated chains which are infinitesimally small (and may pass undetected), and I grant that it is possible we may carry away from this colony the large forms, but still I imagine that we are also carrying away with that culture one or two small forms which under proper conditions will multiply and grow while others don't. Up against that fact is this fact: we are making smears from these cultures daily and we find that the largeness and smallness in size occur under our eye almost, so that that does not necessarily follow; and then, finally, we have isolated from the case of one spontaneously-paralyzed chicken that occurred in premises where there was a case of poliomyelitis in this town adjacent to Rochester a peculiar form of streptococcus. This chicken had a typical, apparently flaccid paralysis. I watched it for two weeks and then chloroformed it and from the spinal fluid and cord of that chicken we isolated this peculiar organism and we brought it to New York. It is quite different and quite anaerobic and in doing various things with it we find it is very similar indeed to those things which we find in human cases. It does cause paralysis in animals. It grows like these strains do and when grown in our medium it grows large, and when grown in the culture medium of Flexner and Noguchi it grows large and the organisms are apparently the same; so the small form must be something peculiar to the germ of poliomyelitis.

"We have taken strains of pneumococci, one, for instance, that originally was passed through thirty-one and thirty-five animals, and the two strains we worked with were, I think, kept in the dried spleen of a mouse that died of pneumonia, for I don't know how many years, then cultures were made and on injecting these we obtained a fine pneumococcus. Placing these in our medium we get a fine typical growth of pneumococci, while in their (Flexner and Noguchi's) medium we have gotten the small forms, fully as small as those which Flexner and Noguchi described. That surely was not an epidemic case. It was isolated from lobar pneumonia. It was passed through thirty-one and thirty-five animals respectively and then kept in a dried state—in the dried spleen of a mouse for several years. We purposely selected one of these strains because of ideas which I have in connection with the possible occurrence of poliomyelitis and to simply cover the thing beyond any question of doubt that I was not working with a peculiar strain that might be isolated from other sources of poliomyelitis at this time.

"It looks as if poor nutrition and lack of oxygen certainly tend to grow these things in the very small form, but remember I'm not questioning for a minute the established fact that the virus of poliomyelitis is filterable. There is no question about that. It is present in the brain and cord and resists glycerination. That is established; there is no question about that. But these organisms that we worked with stand glycerination. We have cultured glycerinated virus—glycerinated monkey and human brain and cord and we are able to isolate the small and large forms both. I don't believe that the large form really is a contamination; because it has a greater infecting power it does all that the small one does and does more than that, and because of its presence in animals and its appearance in the tonsils and in these abscesses I must say this: I think really that many of us are very dense. Do you know that for years it has been known that the virus of epidemic poliomyelitis had particular affinity for lymphoid tissue and until I succeeded in sectioning these tonsils in the way I did (that is, transversely) I could find no record where a pathologist has sectioned tonsils in such a way that he could find whether there were abscesses in the tonsils or not. When I found these results I said to myself that it must be accidental, but I found it in every one of the tonsils taken out after death from a child seventeen months old to a man twenty-four years of age. I think that is of great significance; the entrance way is established right here in the throat. We feel that is important in determining the cause of death. As regards the cause of death, there are other problems connected with that that we don't know about. We simply must experiment.

"I appreciate your very kind reception and thank you very much."

SOME ASPECTS OF NEUROLOGICAL SURGERY.*

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THE purpose of these notes is to emphasize some of the more important principles of neuro-surgery and touch on the conditions which have for so long been neglected; either because they are not recognized, or perhaps on account of the verdict that they are not amenable to successful surgical intervention. The day is unquestionably past for this branch of surgical science to be regarded as an ideal in Utopia and a remedy "in extremis" only.

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* Read before the Brooklyn Neurological Society, Brooklyn, New York, Dec. 6, 1916.

Regardless of the form of nerve work whether it be on the head, spinal cord or peripheral region, asepsis, hemostasis and anesthesia comprise the signal stations of first consideration, with asepsis always taking precedence. It is being so carefully guarded today by men working in this field that an infection is a rarity and a remote possibility in clean wounds. The edict of asepsis is particularly far reaching in surgery of the head. It is not possible to take chances here with impunity as one may do at times in other regions, but there is no more excuse for infecting a clean cortex than a clean abdomen, provided the most modern technic is faithfully adhered to.

It seems scarcely pertinent to remark that many brain tumors prove hopeless due to long delayed diagnosis. Regarding cortical tumors alone, one authority's opinion is that inasmuch as focal epilepsy may be the only symptom of a new growth originating near the central fissure, all cases of focal epilepsy should be explored upon the first definite appearance of the symptom, because this gives the opportunity of discovering at an early and removable stage a tumor which otherwise would in time prove fatal.

Of the classic tripod of symptoms associated with intracranial tumors, choked disk is beyond doubt the one most frequently neglected until full-fledged and often is not noted until secondary atrophy has become established. This is wholly inexcusable where the trained man is held responsible, for it is mere repetition of a well-known fact that the disk is one of the most important indications of intracranial pressure and an ophthalmoscopic examination should always be made where disease within the cranium is suspected. Still more important is it that the examiner should be capable of appreciating slight edema of the retina and papilla—such as blurring of the nasal halves of the disks—and early distention and tortuosity of the veins, which conditions precede actual choking, for it is these mild pressure signs which often permit an early diagnosis and therefore offer the patient his best chance when surgery is indicated. It should, however, be constantly kept in mind that a high grade of choked disk does not mean lost vision, which does not fail until nerve atrophy supervenes.

In tumors of the hypophysis there may be no choking of the disk, but a primary optic atrophy as a result.

It is futile to attempt to restore vision completely lost, by any form of surgery and it is often impossible even to ARREST the progress of blindness when atrophy has started.

All intracranial new growths are treated according to location, when possible to demonstrate their territory, but in any event a vertical subtemporal decompression—bilateral if necessary—can be performed to preserve the vision remaining, offset the dural pressure pains and in some cases a tumor at first not localizable manifests definite focal symptoms after decompression.

Lesions of the cerebellum are common and many indicate surgical treatment and are often easily accessible, such as those of the cerebello-pontine recess—most frequently fibro-endotheliomata—and a type with good prognosis. It is of interest to know that one lateral lobe of the cerebellum may be totally excised and yet restoration of function be almost complete, also that an unsuspected congenital absence of one lobe was found at autopsy.

In all cerebellar surgery of today, both lobes are exposed including removal of the posterior half of the foramen magnum.

Of all intracranial lesions where clinical history is of primary importance, brain abscess stands first, because there are no absolutely diagnostic signs. By far the most important group comprises those signs which occur from extension of suppurative processes from the middle ear, mastoid cells, sphenoidal or frontal sinuses; and over ninety per cent are said to be a sequel of chronic otitis media. If sufficient criteria exist to suspect an abscess, far better is it to perform an exploratory subtemporal decompression during the initial stage—should it be suspected in this the most frequent site—than to postpone interveniton until the terminal stage has bequeathed the patient to the morgue.

With further advances in diagnosis, much may yet be accomplished surgically for certain types of hemorrhage. Of the comparatively few conditions of this nature submitted to operation, surprising and gratifying results have already been reached in some instances, such as the disappearance of partial anesthesia and aphasia within a few days after evacuation of the clot, indicating pressure as the chief factor in producing the symptoms rather than actual destruction of nerve tracts. Operation may offset the immediate danger of fatal compression and removal of the clot greatly lessen residual paralyses which may be largely due to slow pressure atrophy of adjoining tracts and not to actual destruction by laceration.

A great field of fruitful possibilities includes those types of cerebral spastic paralysis—whether monoplegic, hemiplegic or diplegic—resulting from hemorrhage or cyst following birth injury, usually giving a history of instrumental delivery. The ideal time for these patients is immediately after birth when a small trephine opening without anesthesia will expose the fluid body and permit its evacuation; but even in the children from one to ten years and in some, older, such marked and unhoped for results have occurred that nothing less than actual demonstration would be convincing. A notable feature in many of these patients is the degree of mental impairment associated with the palsy and also due to pressure since this is as greatly improved by operation as the physical side and usually responds more quickly where the physical disability has extended over some years. All of these patients offer the best prognosis at the earliest possible age in order to prevent contractures and marked atrophy.

Hydrocephalus has an exceedingly favorable outlook under present treatment, especially the more moderate types. The procedure includes a vertical subtemporal decompression and insertion of small linen strands, about six in number, beneath the dura, through muscle and fascia and tucking the outer ends beneath scalp tissues. Where the operation demonstrates an internal hydrocephalus these linen strands are carried into the ventricle by a knotted end, the loose ends being disposed of as mentioned previously. As a matter of fact by far the greater number of these patients to date have proven to be external in type. The principle of this treatment embodies the formation of small, permanent channels for drainage of the excess cerebrospinal fluid by the time the linen strands are completely absorbed, which usually takes from six to eight months.

The whole basis for operative treatment on fractures of the skull has been changed within recent years due to the knowledge that indications for intervention are produced in most cases by cerebral pressure resulting from the traumatic edema, at times intensified by a hemorrhage of subdural or extra dural variety. It is when evidence of progressive medullary compression is manifested that prompt relief should be offered for if this decompression is postponed until secondary shock becomes established, it only hastens the patient's end. Naturally, where any depression of the vault exists, its removal should be accomplished, but the one prime factor in those selected cases which make surgery imperative, is above all else the edema of the brain. When we realize that the fully developed normal brain completely fills the cranial chamber, the consequences of a markedly swollen, edematous, brain can be appreciated without question.

In oxycephaly, a subtemporal decompression either unilateral or both sides when pressure is extreme, will relieve the intense headaches and prevent blindness as already shown repeatedly.

The vertical subtemporal decompression is the cranial operation most frequently employed because of its wide application to conditions affecting the brain; where other procedures would be either unavailing or wholly unnecessary. Often, it may wisely be employed before doing more extensive work on the skull in cases of extreme pressure from tumor. It entails the least risk of any operation on the head and with modern technic for hemostasis the hemorrhage should be negligible in most instances. Certainly there are always possible complications which may arise at any time and which the trained man constantly apprehends, but with caution and judgment based on a thorough knowledge of these potentialities, rarely should a serious complication arise during this operation. It is of first importance for success in all this work to know what to avoid as well as to be prepared to deal adequately with an unusual situation when it arises. The superior advantages over the old type of horse-shoe incision are; preservation of the temporal muscle which is separated in the vertical incision instead of cutting through its fibres, much less chance of destroying or greatly jeopardizing the integrity of the attachment of the fascia to the temporal ridge which makes it a strong covering for the brain when intact, preventing the possibility of hernia or fungus cerebri; it enables the operator to get down to the thinnest portion of the skull and the middle fossa can easily be drained when indicated as in basal fractures; hemostasis is much more effectively controlled in approaching the bone and all the branches of the temporal artery are not cut as in the former incision. Of COURSE the dura is ALWAYS opened in this operation and LEFT open. Needless to remark, that it would not be a decompression should the bone be rongeured away and a dense, white, fibrous tissue covering left intact over the cortex.

The same general principles covering cranial work apply to surgery of the spinal cord and peripheral nerves. It is the importance of early recognition of lesions affecting these regions that gives the desired results, whether it be a fractured spine, tumor of the cord or injury to the brachial plexus which last condition so frequently follows child birth and is neglected until the pathologic changes have made the prognosis vastly below its possible plane. On the other hand, it is most astonishing to observe the comparative improvement in so many of the conditions of long standing; old fractures of the skull with mental changes, cases of spastic paralysis, spinal cord injuries and peripheral nerve lesions. It but further emphasizes the need of early diagnosis when one can obtain the relatively marked improvement in these long neglected patients.

Despite the fact that the advance in neurological surgery is to a large extent impeded by the widespread idea concerning its dangers and poor end results—an impression for which the untrained and inexpert are responsible—the pursuit of this branch of surgical science still offers a vast field for notable achievement which will in no small degree be stimulated by the incorporation in our modern textbooks of the more exhaustive tenets concerning the anatomy and physiology of the nerve system, a mastery of which is most essential for the specialist in this field of work and to a less degree for the general medical man and general surgeon who may be able to thus recognize these conditions in their early stages and offer the patient the most favorable hope of recovery.

URINARY LITHIASIS.*

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From the Urological Department of the Brooklyn Hospital.

I doubt if there is any department of surgery which presents a more interesting or greater variety of problems in diagnosis and treatment than does lithiasis as it occurs in various parts of the genito-urinary tract.

In some cases the symtomatology is direct and convincing, the diagnosis easy, and the indications for treatment clear cut and well defined. In other cases one can arrive at a diagnosis only after employing a series of tests and examinations involving the highest degree of technical skill, and a decision as to the best mode of treatment often involves the exercise of the surgeon's most careful judgment.

My part on the program does not call for or permit of any extended discussion of the many problems connected with this very interesting subject, nor do we expect to draw any conclusions of great merit from the small series of cases presented. However, they are presented for what they are worth, and as a means of illustrating the way in which these problems are attacked in the Urological Department of the Brooklyn Hospital. It so happens that even in so small a group of cases there have been noted some of the unusual features which have seemed to obscure and complicate the diagnosis. It also happens that I, personally, have made errors in the management of some of these cases, which are frankly admitted. I believe, however, that we often learn more from those cases in which we do make errors, to say nothing of the fact that a frank confession is good for the soul.

In the six months from May first to November first, there have been under my observation twenty cases of urinary lithiasis. They were all in adults, 11 in males, and 9 in females. One case was vesical, and 19 renal or ureteral. One of these was bilateral. the calculi occurring in both kidneys and ureters. Of the remainder, eight were renal and ten were ureteral. It is interesting to note the preponderance of ureteral cases. This proportion perhaps would not hold true in a larger series. All of the ureteral cases, so far as we know, were single calculi. All of the renal cases were multiple. The right side was involved in fourteen cases, the left side in four cases, and both sides in one case. The marked preponderance of right-sided trouble is perhaps greater than is ordinarily noted, but it is a fact that this side is more frequently affected than the left. This seems to apply to all renal lesions—why, I do not know. Truly typical renal colic occurred in nine cases. There was a definite history of hematuria in five cases. Pyuria was noted in twelve cases.

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*Read at Brooklyn Surgical Society, December 7, 1916, under heading of case reports.

Most prominent symptom:

In two cases the most prominent symptom was urethral discharge.

Pain in the loin was the most prominent symptom in nine cases.

Pain in ureter region, not collicky in nature, occurred in four cases.

One case, without any preliminary urinary symptoms, was ushered in with a severe attack of left-sided abdominal pain, and other symptoms of colitis. This patient was treated for the colitis alone for ten days before the diagnosis of calculus was established. Careful examination disclosed a left kidney nearly destroyed by multiple calculi, and required a nephrectomy.

One case had a normal appendix removed for her trouble.

In another case in which there had been no previous history of urinary difficulty, an acute fulminating infection of the kidney developed, which demanded a nephrectomy and partial ureterectomy. A large stone was found in the ureter, just above the pelvic brim.

In four cases perfectly clear urine was noted at the time of examination.

In four cases, two renal and two ureteral, the x-ray was negative, and the diagnosis was established by the wax-tipped catheter. This is a greater number than would ordinarily be expected.

Five cases were treated by nephrectomy, one by pyelotomy, and one by suprapubic cystotomy. There was one death in this group. This was a case of calculous anuria of seventy-six hours' standing, complicated by an enormous, double pyonephrosis. A rapid nephrotomy for drainage was performed, but the patient died on the table. All the others made good recoveries and were entirely relieved of their symptoms. Five cases of ureteral calculus were relieved of their trouble by cystoscopic manipulation which comprised one or all of the following procedures: ureteral meatotomy, dilatation of the ureter and injection of sterile lubricant.

Two cases of renal calculi refused treatment and two cases of ureteral calculus are still under observation.

One case submitted to operation and no calculi were found. This patient was a woman who had experienced several typical attacks of right renal colic, with persistent pain in the loin between attacks. There was pus in the urine obtained from that side, and a wax-tipped catheter passed to the pelvis of the right kidney showed well marked scratches. Repeated x-ray examinations, however, were negative. At operation an incision was made in the kidney pelvis sufficient in size to admit the index finger to thoroughly palpate it. A large probe was passed down the ureter, and a cambric needle passed through the kidney in several places. No calculi were found. It should be noted that she had an attack of colic in the interval between her last examination and her operation, although so far as she knew, no stone was passed from the bladder. This patient has remained well and free from symptoms. She apparently got relief in spite of her operation.

Another case had rather a large calculus in the right ureter about two inches from the bladder which could not be dislodged by cystoscopic methods. An attempt was made to reach it through an extraperitoneal incision. Failing in this, the abdomen was opened, and an effort made to reach the calculus through a combination of both methods. The patient was very obese, took her anesthetic badly, the operation was difficult and prolonged, and was finally abandoned on account of her poor condition while on the table. The stone was not reached. The wound became infected and after a protracted convalescence the patient left the hospital entirely relieved of her urinary symptoms. She returned three months later for the repair of a large ventral hernia, still free from all symptoms referable to the urinary tract. A careful investigation showed the ureter free from calculi. It had evidently been broken up or dislodged at the time of operation and had been passed *per vias naturales.*

There follows an epitome of the case reports of the more unusual and interesting histories, some being cases of true urinary lithiasis included in above series. The remainded are cases which presented symptoms of urinary lithiasis, but which upon careful examination to be suffering from some other pathological condition.

Case 1. Male. Age 22. No venereal history. First and only symptom urethral discharge, of eight months' duration. No urinary frequency. No nocturia. No pain or colic. Slight drop at meatus. Gonococci absent. Glass I and II turbid. Tenderness over right kidney. Murphy's sign present. Cystoscopy: Mild cystitis. Urine from right kidney contained pus; 'phthalein—20 min. Left kidney. urine clear; 'phthalein—6½ min. Radiograph—Multiple calculi right kidney. Nephrectomy. Recovery.

Case 2. Male. Age 22. Gonorrhea ten years ago. Occasional pain in right loin. No colic. No urinary frequency. One month ago, hematuria lasting two days. Two weeks ago rejected by insurance company, albumin in urine. Two days ago, hematuria. Right kidney palpable and tender. Cystoscopy: Normal bladder. Right kidney urine: bloody, 'phthalein—8¼ min. Left urine: clear, 'phthalein—7½ min. Radiograph; 3 small calculi in pelvis of right kidney. Pyelotomy. Recovery.

Case 3. Male. Age 55. Numerous attacks renal colic past six years. Occasional nocturia. Last attack five days ago, left side. Total anuria past seventy-six hours. On admission to hospital did not appear very ill. Temp. 99. Pulse, 100., Resp. 24. Large, tender mass in each loin. Radiograph: Multiple calculi in both kidneys and both ureters. We decided upon nephrotomy for drainage on one side, and then, if his condition permitted, to do likewise on the remaining side. Ether, two ounces, administered. Incision was made over left kidney. A large quantity of foul urine escaped. The operation consumed four minutes. At the end of this time the patient ceased breathing and died on the table. I believe the ether caused his death. He might have had a chance with nephrotomy under local anesthesia.

Case 4. Female. Age 33. For several years dull pain in right loin. Referred with provisional diagnosis of stone. Kidney palpable, slightly enlarged and tender. Urine negative except of low specific gravity. Cystoscopy negative. Pyelogram (kidney pelvis injected with thorium nitrate) shows mild hydronephrosis. Further examination shows areas of hyperasthesia. Diagnosis: Hystero-epilepsy. Referred to medical clinic.

Case 5. Male. Age 21. First and only symptom urethral discharge, existing for past one and one-half years. Slight drop at meatus. No gonococci. Both glasses turbid. He attended clinic for awhile as a case of chronic posterior urethritis. No improvement followed treatment. Cystoscopy: Normal bladder. Right kidney urine turbid, with pus, 'phthalein—none in 15 min. Left urine clear, 'phthalein—7 min. Radiograph showed multiple calculi in pelvis of right kidney. Nephrectomy. Good result. Well at present.

Case 6. Female. Age 50. No previous urinary history except occasional frequency. Ten days ago colitis with left-sided symptoms of pain, etc. So treated. Tender over left kidney. Cystoscopy showed moderate cystitis. Right kidney urine clear, 'phthalein—7½ min. Urine left side turbid, abundant pus, no 'phthalein in 20 min. Radiograph showed multiple calculi in left kidney. Nephrectomy. Good result.

Case 7. Female. Age 27. Dragging pains both loins. Occasional exacerbations followed by polyuria. Palpation—both kidneys large and prolapsed. Cystoscopy: Bladder normal. Pelvis right kidney would gush forth six ounces of residual urine through ureteral catheter when pressure was exerted. Seven ounces residual urine obtained from left pelvis. This phenomenon was followed by normal urine and normal kidney function on both sides. Symptoms much relieved by cystoscopy. A few days later kidney pelves injected with thorium nitrate showed a normal pyelogram. No ptosis of hollow organs. This was a case of intermittent hydronephrosis due to ptosis of the kidneys. She was much relieved by a belt.

Case 8. Male, age 25. For past year pain in right loin. Occasional frequency and urgency of urination. Bladder urine macroscopically clear. Tenderness over right kidney. Cystoscopy shows normal bladder. Ureters normal and readily catheterized. Right kidney urine contained small amount of pus. 'Phthalein 12 minutes. Left kidney urine normal. 'Phthalein 7 min. X-ray shows large shadows in lower pole. Diagnosis: Renal lithiasis. Nephrectomy. Good recovery. After removal, on hection, the kidney showed a large calculus in the pelvis and a collection of gravel in the medulla, toward the lower pole. Cortex appeared perfectly normal. This raised the question whether or not an effort should have been made to save the kidney. I believe where gravel and pus are present and we can be sure of the function of the remaining kidney, that nephrectomy is the proper procedure. The more conservative measures are almost invariably followed by a recurrence of trouble. Conservation should be reserved for those cases that are free from gross infection, and in which there is a single calculus, or where multiple calculi are discrete.

Case 9. Urine normal. Cystoscopy shows moderate congestion of posterior urethra and trigone. Ureteral orifices normal. Catheters pass readily to kidney pelves. Kidney urines and function equal and normal. Radiograph shows small calculus in left ureter three inches from bladder. Wax-tipped catheter passed into left ureter shows definite scratches. Several attempts to dislodge calculus by cystoscope. So far unsuccessful. Still under observation.

Case 10. Male 42. One year ago right renal colic. Another attack one month later. Brought to hospital in ambulance, July, 1916, with typical attack. X-ray showed calculus. Olive oil, 2 ccm. injected right ureter. Passed calculus from urethra thirty-six hours later. Reports to clinic. Is well, except has stricture of urethra.

Case 11. Female, age 35. Frequency of urination for past ten years. Worse by day. Dysuria. Cystoscopy showed a calculus engaged at the mouth of the left ureter. Attempt at delivery unsuccessful. Ureteral meatotomy. Could be grasped with forceps but not removed. Two days later was passed by patient. Patient remained well for three months. Returned to clinic with recurrence of symptoms. Exteral meatotomy. Could be grasped with forceps but not removed. Two days later was passed by patient. Patient remained well for three months. Returned to clinic with recurrence of symptoms. Examination showed a stricture of left ureter one inch from bladder, catching lightly on No. 6 French catheter. A small amount of pus obtained from urine of affected side. Stricture was gradually dilated with oblivary bougies and 25% Argyrol instilled into kidney pelvis. This was followed by a rapid subsidence of her trouble.

Case 12. Female. Age 48. Right renal colic about one year ago. Few days later passed calculus. Four attacks left renal colic in past six months, the last one one month ago. Urine normal. X-ray shows small calculus in left ureter. Wax-tipped catheter shows scratches. Ureteral meatotomy, dilatation. Stone passed four days later.

Case 13. Male. Age 50. Pain in right groin off and on for past year. X-ray shows suspicious shadow over course of right ureter. Ureteral calculus excluded by lead catheter and x-ray shadow was one inch from ureter. Diagnosis: Calcified gland.

Case 14. Male. Age 40. For past year pain in loins and frequency of urination. Urine and kidney function normal. Suspicious shadows in course of both ureters. With x-ray ureteral lead catheters in ureters shadow on right side one-half inch away from ureter. On left side apparently the shadow was directly over course of ureter. Wax-tipped catheter in left ureter shows no scratches. Ureteral calculus excluded. Endoscopy shows marked congestion of posterior urethra. Diagnosis: Chronic posterior urethritis. Cause of shadows unknown; probably glands.

Case 15. Male. Age 22. Vesical calculus. Several years ago pain in right loin. Hematuria. Since then bladder irritability getting worse. Urine turbid, pus. Cystoscope shows large calculus in bladder. Ureters not catheterized. Suprapubic cystotomy. Recovery.

In conclusion, I wish to thank my chief of service, Doctor William B. Brinsmade, through whose courtesy I am permitted to report many of these cases.

SOME CLINICAL PHASES OF "PERIOSTITIS."

Joseph P. Murphy, M.D.

Brooklyn-New York.

THE periosteum is a tough connective tissue surrounding bones adhering to the surface in nearly every part *except* at the cartilage covered extremities.

In the new born and in the young, the periosteum is composed of three layers; an outer, or fibrous layer, containing some blood vessels and composed of white fibrous tissue; a middle, or fibro-elastic layer containing some blood vessels, fibrous tissue and much elastic tissue; and an inner or osteogenetic layer, which is very vascular and contains numerous cells which are converted into osteoblasts, or bone-forming cells.

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* Read before The Brooklyn Surgical Society, Dec. 7, 1916.

It is intimately connected with the epipheseal cartilage, but much more loosely with the shaft of the bone.

Periostitis and osteitis are properly grouped under *osteomyelitis,* as different stages of the same pathological condition.

Periostitis; most of us use the term periostitis, and mean an inflammatory condition of the periosteum and macroscopically inflammation of the superficial surfaces of the adjacent bone.

In presenting this paper I wish to cite some of these very familiar cases, which to me, have been very difficult to properly diagnose, and more difficult to get satisfactory results.

For convenience, periostitis may be considered as *traumatic* and *non-traumatic.*

Under non-traumatic we may have *acute periostitis* as a sequellae to some of the infectious diseases, as typhoid or scarlet fever.

The symptoms of acute periostitis are those of a superficial swelling of the bone, which is not thickened or enlarged. It is exceedingly tender; the slightest pressure causing pain. The presence of pus is indicated by fluctuation or aspiration.

Usually the superficial forms of suppurative periostitis are extensive.

Typhoid bacilli are frequently found in both suppurative and non-suppurative periosteal inflammation.

This condition most frequently occurs during the third week of the typhoid.

The chronic form of suppurative periostitis is found most frequently in connection with tuberculous conditions of the bone.

In some cases of inflammation of the periosteum of young adults in long bones, the pus appears to consist chiefly of mucus, or like synovial fluid, and called by old clinicians "periostitis-albumenosa."

Chronic non-suppurative periostitis occurs as a painful and most obstinate affection.

There is a thickening of the periosteum and also a formation of new bone as the result of the increased activity of the *osteogenetic* functions, due to the irritation, the new bone forming much in the same way as a callus. The shaft is well defined, the new growth being entirely on the periphery. This form is most frequently seen in the secondary stages of syphilis, and from unknown (?) causes.

It frequently leads to an osteosclerosis, or eburnation of the bone, in which the marrow is replaced by this ivory-like structure.

I will cite two cases under this heading in both of which there was much difficulty and error in diagnoses.

Dr. Williams has taken x-ray plates of cases which are here shown.

W. C. Woman, 47 years of age. Native of Ireland.

When eight years of age, taken with pain in left tibia (leg). Her mother said they were growing pains. There were six living children at this time; two older, three younger. This pain would last about a month, with period of six months quiescence of symptoms. When about eighteen years of age was taken to a hospital in Belfast, where she remained about two months and had local applications, and received only temporary relief. The leg gradually increased in size and lost its normal contour. The history of pain, worse at night, with periods of exacerbation and quiescence persisted for thirty years. Many doctors and dispensaries were visited during this period.

In January, 1908, she went to St. Mary's Hospital. Many and varied diagnoses were made. Dr. Walter Wood suggested a possible diagnosis of "syphilitis periostitis," despite the absence of a history of infection and the family history.

Treatment consisted of denuding the bone of the periosteum, and active anti-syphilitic treatment.

She remained in hospital several months; left apparently cured and able to resume work. After a period of six years she again entered St. Mary's Hospital with the same series of symptoms. We were able this time to exclude syphilis by laboratory tests of the blood and spinal fluid, both before and after provocative specific treatment.

Treatment. At operation the bone was found to be sclerosed or eburnated.

A groove, about an inch wide and half an inch deep was chiseled out of affected area and potasium iodide given internally.

She left the hospital at the end of nine weeks. Up to date, there has been no recurrence of symptoms. In this particular case note the duration of the disease, diversity of diagnosis, the absence of definite etiological cause and the effect of the iodides.

Case II. Twenty-seven years old. Miss F. E.

In 1906, pain in right shin. This would last for an afternoon and was called "growing-pains." Months would elapse, and then pain at night and of longer duration, but comparatively free from pain in intervals. They were not preceded by attacks of sore-throat.

Diagnosed, neuritis.

These pains became more severe and more frequent, covering period of five years. The actual cautery giving temporary relief. *Operated,* November, 1911. Free incision, denuding the bone of periosteum. (Beck's paste.)

In both these cases the classic symptoms: pain, especially at night, but also occurring in day time.

Treatment, in general: Counterirritation with iodine, blister, actual cautery; even leeches will often give great relief.

In obstinate cases a vertical incision should be made of sufficient length to divide the thickened periosteum to the bone. The periosteum should then be retracted to remove the tension on the bone, and the edges of the incision and superficial structures united. In some cases it may be advisable to bore into the bone to determine the presence of an abscess.

And iodides.

Traumatic periostitis is usually localized. There is a thickening at the site of injury, as the result of the irritation.

Usually, there is a resolution, or at the most a *slight* thickening at site of injury.

Occasionally there is an exostosis varying in size, which may become, or is, malignant. I will present two cases with x-ray plates of this type.

Case I. B. A. Boy, 19 years of age.

About five years ago was hit on outer side of thigh with a baseball. A swelling formed; not particularly painful. This gradually increased in size.

A diagnosis of simple exostosis was made, and the tumor removed from bone during July of 1915. The pathological report was sarcoma.

The boy is in perfect health today.

Comment: Periosteal sarcomas are often the sequellae of injury. They are of the round cell type; grow rapidly and are exceedingly malignant. The giant cell, most frequent, next the small round cells, and occasionally they are made up of spindle or mixed cells and are less malignant. In this case the growth was slow, and apparently there is no metastases.

Case II. M. G., forty years of age.

February, 1916, received a severe blow in middle of upper arm. Within a month, after swelling subsided, a painful exostosis was noted. At the time this plate was made, this mass was in the formative stage, which accounts for the slight shadow. Surgical interference was refused.

Comment: Malignancy usually follows slight trauma. The trauma here is severe.

Query? Is it malignant?

References: Gray's Anatomy.
Murphy's Clinics.
Brewer's Surgery.
Warren's Surgical Pathology.

APPLICATION OF THE "ALLEN TREATMENT" OF DIABETES IN THE HOME.

John N. Evans, M.D.,

Brooklyn, N. Y.

THE rapid results obtained and permanent effects secured by the use of Dr. Allen's principles in dieting patients suffering from diabetes mellitus seem to justify its broader application and excuse the addition of this short outline to the already voluminous literature. The carefully measured feedings and close supervision under which these results have been obtained, are seldom possible in general practice and even in many hospitals where completely furnished diet-kitchens are lacking. It is desirable, however, in order to secure the best results, to adhere closely to the rules worked out. There is danger of tiring a patient with the monotony of such a course, even though for a few weeks, yet he should always be reminded of his condition by its inconvenience.

The treatment as outlined below has been carefully worked out to correspond with Dr. Joslin's arrangement of "The Allen treatment," (*Journal A.M.A.*, Oct., 1915, No. 4). It has been applied to a number of patients, with uniformly good results and seems to meet the desired need, a convenient yet practical arrangement of this elaborate treatment in such form as can be carried out in the home.

It is to be remembered that the syndrome which makes up diabetes mellitus is due to a disturbance of carbo-hydrate metabolism, from various causes and is associated with imperfect oxidation of the fats.

Outline of Treatment

(Urinalysis, of 24-hour specimen, each day by patient or physician.)

Three Periods.

(1) Fasting—(Till sugar disappears from urine)
  a To rest the organs concerned in the assimilation of carbohydrates.
  b To eliminate all unassimilable sugar.

(2) Graduated feeding—(when sugar has disappeared from urine)
  a To find maximum amounts of carbohydrates, proteins and fats which can be taken without causing glycosuria.
  b To develop this tolerance slowly.

(3) Stationary diet—(When feedings have been worked up to maximum tolerance for carbohydrates, proteins and fats.)
  a To keep organs of assimilation of carbohydrates within their capacities.
  b To rest the organs frequently.

(1) Period of Fasting—(Daily allowance) (Patient in bed).
  1, Allow plenty of water and,
  2, one cup of tea and,
  3, one cup of coffee and,
  4, ten ounces of clear meat broth (if sugar persists over three days)
  5. Eight minims of alcohol (Spirits Frumenti) for each two pounds of body weight (small doses q. 3 hr.) and alkalies—if acidosis appears, until it clears up.

(2) Period of Graduated Feedings.

Day	Food	Measure	Calories
1st	5% Vegetables	40 Teaspoonfuls	20
2nd	5% "	41⅓ "	22
3rd	5% "	42⅔ "	24
4th	5% "	44 "	26
	Eggs	3 (Raw) "	225
5th	5% Vegetables	45⅓ "	28
	Eggs	3 (Raw)	225
	Scraped Beef	3 " "	50
6th	5-10-15% Vegetables (Gradually)	45⅓ "	28
	Add	1⅓ "	1

every other day up to tolerance or till getting 1 teaspoonful per 2 lbs. body weight.

Protein.......Add........ 4 Teaspoonfuls 180
(Eggs & Scraped Beef) Daily to tolerance or till getting ¼ teaspoonful per 2 lbs. body weight.

Fats..........Add.......6⅔ teaspoons of (Cream, Butter & Bacon) daily when Protein up to ¼ " per 2 lbs. Body Weight.

	Calories
Cream or	270
Butter or	550
Bacon	770

(3) Period of Stationary Diet.

1, Keep up calorific needs of moderately active patient—2500 calories per day—use alcohol and fats to fill out where needed.

2, Moderate exercise and fresh air.

3, One fast day in each week—{partial or complete—
  1, Tolerance under 5 drams of carbohydrate—total fast
  2, Tolerance 5 drams to 9 drams of " —remove ½ fats and proteins
  3, " 9 drams—15 drams of " — " 10 and 15% vegetables
  4, " 15 drams and more of " —Halve carbohydrates

If sugar reappears—
  1, Fast till sugar free—as at first.
  2, Restore diet preceeding reappearance of sugar but allow only one-half the amount previously tolerated, of carbohydrates, for two weeks, then increase one dram per week to tolerance.

Other points
1, Boil vegetables twice as long as necessary to cook them ordinarily; then
2, Cut them up finely and measure in rounded spoonfuls.
3, Never allow bread—it is too easily over indulged in.
4, Patient should keep below his normal weight.

Lists of carbohydrate % in foods (approximate)

5% group

lettuce
spinach
sauerkrout
string beans
celery
asparagus
cucumbers
brussel sprouts
sorrel
endive

swiss chard
sea kale
cauliflower
tomatoes
rhubarb
eggplant
leeks
beet-greens
water cress
cabbage

radishes
pumpkin
ripe olives
grape fruit
unspiced or sweetened pickles
clams
oysters
scallops
liver

10% group

onions
squash
turnip
carrots
okra
mushrooms
beets
watermelon

lemons
oranges
cranberries
strawberries
gooseberries
blackberries
peaches
pineapple

15% group

green peas
artichokes
parsnips
canned lima beans
apples, pears
apricots, cherries
currants
raspberries
huckleberries

20% group

potatoes
shell beans
green corn
boiled rice
macaroni

Strict Diet;
meats, fish, broths, gelatine, eggs, butter, olive oil, coffee, tea, cracked cocoa.

Equivalents (approximate)
¼ dram (15 grs.) proteins—4 calories. 1 dram—1 rounded teaspoonful
¼ " fat—9 calories. 1 tablespoonful—4 rounded teaspoonfuls
¼ " carbohydrate—4 calories. 1 dram—1 rounded teaspoonful
¼ " alcohol—7 calories. 1 dram of 5—10% vegetables—about 5-10 calories
A patient at rest needs 25-30 calories per two lbs. of body weight.
"No patient requires more than 5 days to become sugar-free."

(Foot Note) (2) Period of Graduated feeding; (EQUIVALENTS)

Day	Food	Metric	English	Household	Calorie (about)
1st	5% Vegetables	150 gms.	40 drams (5 oz.)	40 teaspoonfuls	20
2nd	5% "	155 "	41 1/3 drams	41 1/3 "	22
3rd	5% "	160 "	42 2/3 "	42 2/3 "	24
4th	5% "	165 "	44 "	44 "	26
	Eggs (3)	20 "	5 "	3 raw	225
5th	5% veg.	170 "	45 1/3 "	45 1/3 "	28
	Eggs	20 "	5 "	3 raw	225
	Scraped beef	15 "	3 "	3 "	50
6th	5 to 10 & 15% veg.				
	(gradually)	170 "	45 1/3 "	45 1/3 "	28
	add	5 "	1 1/3 "	1 1/3 "	
	every other day up				
	to tolerance or to 3 gms.		1 "	1 "	
	per kilo body weight		2 lbs.	2 lbs.	
	Protein—(eggs scraped beef)				
	add 15 gms. daily		4 "	4 "	
	to tolerance or 1 gm.		15 gr.	¼ "	
	per kilo. body weight		2 lbs.	2 lbs.	
Fat		add 25 gms.	6 2/3 drams	6 2/3 sp. f.	
	(cream, butter, bacon) daily when protein				
	is up to 1 gm. .... ¼ dram .... ¼ sp. f.				
	per kilo. body weight 2 lbs..... 2 lbs.				

MINUTES OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND, ANNUAL MEETING, 1917.

THE Nineteenth Annual Meeting (Fifty-seventh Regular Meeting) of the Associated Physicians of Long Island was held at the Brooklyn Hospital, Brooklyn, N. Y., Saturday, January 27th, 1917, and was attended by one hundred and fifty guests and members. This meeting differed in character from any previously held by the Society. This was the first meeting to be held in a hospital and the first attempt to have an all-day convention and to judge from the unanimous expressions of satisfaction and approval and the unusual number attracted by every operation, demonstration and paper upon the program the innovation is most liable to be repeated. The arrangements were especially appreciated by the members from distant points upon the Island as they were enabled to attend and return home late in the afternoon. The first of the operative clinics took place at nine o'clock in the morning and the last paper was read at a quarter to five in the afternoon, and, except for an hour and a half taken out for the enjoyment of a most enjoyable luncheon and social confab, there was a scientific supply of the highest order for every moment from start to finish. No meeting ever held by the Society deserves a higher rating than this one and at its close the President, Dr. Dudley Roberts, the Chairman of the Scientific Committee, Dr. Harris A. Houghton, the Chairman of the Entertainment Committee, Dr. Frederick C. Holden, and the Hospital Authorities were voted a unanimous vote of thanks. One entire wing of the hospital was placed at the disposal of the Society with auditorium, operating rooms, demonstration rooms and lounging rooms and nothing was left undone by the hospital management to make the setting of the meeting attractive in all respects. The detailed program follows, the Scientific Session being in charge of the Chairman, Dr. Harris A. Houghton.

Program.

9:00 a. m. Operative Clinics.
By the Urological Department,
Drs. Brinsmade and Rathbun
By the Gynecological Department,
Drs. Hussey and Zimmerman
Temporary operating rooms in west pavilion, fourth floor.

Scientific Session in the Clinical Conference Room, Main floor, north wing.

10:45 a. m. Differentiation of Types of Pneumococcus.
Demonstration of Methods ....Dr. Jessup
Analysis of Series of Cases....Dr. Wm. H. Lohman
11:05 a. m. Demonstration of Intradermic Reactions in Vaso-Motor Rhinitis, Hay Fever and Asthma,
Dr. Alex. Howe
11:15 a. m. An Unusual Case of Aphasia ....Dr. Carrol Nichols
11:30 a. m. The Use of Radium in Uterine Disease,
Dr. John Clark, of Philadelphia

12:00 Lantern Slide Demonstration of Methods of Organization, Control and Publicity in the Genito-Urinary Department of the Brooklyn Hospital Dispensary, Dr. Alec. Thomson
12:15 p. m. Demonstration of Case of Polycythemia (Osler's Disease), Drs. Raymond Clark and Harris Houghton
The report of the Eye Examination was presented by Dr. James H. Andrew.
12:30 p. m. Annual Meeting.
1:15 p. m. Luncheon in Main Dining Room.
Inspection of New Hospital.
Inspection of Pathological Exhibit, Dr. Emil Schwarz
Inspection of Exhibit of Color Photography of Skin Diseases .... Dr. N. T. Beers

Afternoon Scientific Session.

2:45 p. m. Acute Pancreatitis Followed by Cyst, Dr. William Linder
3:00 p. m. Lantern Slide Demonstration of Polya Operation, Dr. H. B. Delatour
3:15 p. m. Treatment of Asphyxia of the Newborn, Dr. H. C. Allen
3:30 p. m. Methods in Urological Diagnosis .... Dr. N. P. Rathbun
3:45 p. m. A Successful Treatment of Bichloride Poisoning, Dr. H. G. Webster
4:00 p. m. Shoes and Feet .... Dr. Jac. Rushmore
4:15 p. m. Methods of Diagnosis in Breast Tumors, Dr. John E. Jennings
4:30 p. m. Accidental Separation of the Placenta, Dr. John O. Polak
4:45 p. m. The Pessary in Retroversion and Prolapse, Dr. Robt. L. Dickinson

The business session was called to order at half after twelve by the President, Dr. Dudley Roberts. By general consent the reading of the minutes of the October, 1916, meeting, as they had been published in the Long Island Medical Journal for November, 1916, was dispensed with. Also by general consent, the report of the Membership Committee was not read as it had been sent to each member with the notice of the meeting. The Society voted to elect all applicants for membership whose names appeared upon the report of the Membership Committee.

REPORT OF THE MEMBERSHIP COMMITTEE.

Proposed by Royale Hamilton Fowler.

Erasmus Arlington Pond, 1087 Dean Street, Brooklyn; University of Vermont, 1889.

Proposed by Martin M. Kittell.

Frank J. Wiegand, 329 Chestnut Street, Richmond Hill; Long Island College Hospital, 1900.

Proposed by James Cole Hancock.

Edward Franklin Smith, 8418 104th Street, Richmond Hill; Bellevue, New York, 1889.

Winfield A. Peterson, 454 43rd Street, Brooklyn; University of Buffalo, 1906.

Frank Lawrence Cochrane, 703 Sterling Place, Brooklyn; Physicians and Surgeons, New York, 1900.
Morris Walgrove Henry, 664 East 18th Street, Brooklyn; Physicians and Surgeons, New York, 1906.
Max Wachsman, 429 43rd Street, Brooklyn; Albany, 1901.
Frank X. Brown, 8217 22nd Avenue, Brooklyn; Long Island College Hospital, 1913.
Joseph A. Geis, 2342 Summerfield Street, Glendale; New York Homeopathic, 1913.
Joseph G. Leiter, 598 McDonough Street, Brooklyn; Bellevue, New York, 1888.
Nathan Meyers, Northport; Long Island College Hospital, 1911.
Edward F. Duggan, Valley Stream; Long Island College Hospital, 1903.
William Livingston Stone, 444 74th Street, Brooklyn; Baltimore Medical, 1910.
Moses Kahn, 702a Halsey Street, Brooklyn; University and Bellevue, New York, 1903.
Stuart Close, 248 Hancock Street, Brooklyn; New York Homeopathic, 1885.
Nathaniel P. Breed, Douglas Manor, Douglaston; Harvard, 1901.
Albert Lincoln Clarke, 100 Nassau Avenue, Brooklyn; Bellevue, New York, 1878.
Clark Burnham, 182 Clinton Street, Brooklyn; Hahnemann, Philadelphia, 1881.
William de Forrest Voorhees, 775 Washington Avenue, Brooklyn; New York Homeopathic, 1915.
Louis Harry Taylor, 175 Academy Street, Long Island City; University and Bellevue, New York, 1905.
Irving Flyer, 5401 14th Avenue, Brooklyn; New York Homeopathic, 1915.
Sherwood V. Whitbeck, 678 St. Marks Avenue, Brooklyn; Physicians and Surgeons, New York, 1901.
Elbert M. Somers, 33 Lefferts Place, Brooklyn; New York University, 1893.
F. P. Hatfield, 55 Washington Avenue, Rockaway Park; Long Island College Hospital, 1899.

The Secretary read the report from the Historical Committee compiled by the Chairman, Dr. William Schroeder, which follows. This was ordered received and filed.

REPORT OF THE HISTORICAL COMMITTEE.

The Year 1916 will be remembered as the most successful in the history of the Association. The large number of new members that have been added to our membership is without precedent in any medical society known to the writer. It indicates what can be done if a united effort is made in any given direction.

The death rate, true, is larger than we would like to see it, but considering the number of members now enrolled as active members of our Association the death rate is not more than may be expected.

Our first duty at this time is to pay our respects to the memory of our departed colleagues, many of whom have been active in the work of the Associated Physicians of Long Island. They have each performed their work as members of our profession with an eye single to the good of all. In testimony of our respect to their memory, and acknowledgment of their work in behalf of suffering humanity—their names are here recorded.

Active and Former Members of the Associated Physicians of Long Island.

Date of Membership		Date of Death
1908-1916	Joseph John O'Connell, M.D.	Jan. 1, 1916
1902-1916	Arthur Linwood Reeve, M.D.	Jan. 4, 1916
1914-1916	Phares James Dukeshire, M.D.	Jan. 8, 1916
1906-1910	John Ferdinand Bates, M.D.	April 19, 1916
1914-1916	Traverse Rock Maxfield, M.D.	April 23, 1916
1899-1916	Edwin Alonzo Goodridge, M.D.	May 31, 1916
1899-1916	John Alva McCorkle, M.D.	August 15, 1916
1911-1916	John Lester Keep, M.D.	September 30, 1916
1902-1916	Nathaniel Matson, M.D.	October 15, 1916
1905-1916	Henry J. McKenna, M.D.	October 17, 1916
1899-1916	John Halsey Benjamin, M.D.	November 26, 1916

During the year, 1916, one hundred and thirty names of physicians were presented for membership in the Association; they represent the following Universities and Medical Colleges:

University	Johns Hopkins	2	
"	Cornell	11	
"	Pennsylvania	2	
"	Queens	3	
"	New York	6	
"	Syracuse	3	
"	Laval	1	
"	and Bellevue	3	
"	Vanderbilt	1	
"	Buffalo	1	
"	Riel	1	
"	Giessen	1	
"	McGill	1	
"	Vermont	1	
		——	Total 37

Long Island College Hospital	36	
College Physicians & Surgeons N. Y.	20	
N. Y. Homeopathic Medical College	20	
Hahnemann Med. Col., Phila.	1	
N. Y. Eclectic Medical College	1	
Dartmouth Medical College	3	
Bellevue Hospital Md. College	3	
Miami Medical College	1	
Barnes Medical College	1	
Louisville Medical College	1	
Atlanta Medical College	1	
Albany Medical College	2	
Georgetown Medical College	1	
Woman's Med. Col. N. Y. Infirmary	1	
N. Y. Med. Col. for Women	1	
	——	Total 93

Universities	37
Medical Colleges	93
Total number of members admitted	130

During the year the Long Island Medical Journal has published short obituary notices of our deceased members, which from information received from those most interested has been appreciated.

Your secretary has retained his interest in the work of the historical committee, and the members generally have responded to the biographical memoranda sent them, more so than heretofore. It may not be out of place for me to refer at this time to what is known as the Brooklyn Historical Group—it is simply a number of physicians who are making an effort to create a more general interest in Historic Medicine in America. May it prove a success.

Let me also hope that the year 1916 will be an incentive for years to come.

William Schroeder, M.D.,
Chairman of the Historical Committee.

Dr. Arthur D. Jaques, Chairman, read a report from the Committee on Public Health. This was ordered received and filed.

Public Health Report.

Since the last report there have been completed 1,125,000 feet of trenches on the meadows of Hempstead Bay under the auspices of the Rockaway Peninsula Mosquito Elimination Committee. In addition to this the Nassau County commission has contracted for 125,000 feet of trenches to finish the work begun by the Rockaway Committee; also the commission has contracted for 900,000 feet which when finished will extend the work from Jamaica Bay eastward nearly to Freeport. The work in Jamaica Bay has been carried out by the City of New York and in the neighborhood of 4,000,000 feet of trenches have been installed. The Nassau Commission has employed Mr. P. A. Butterick as chief inspector. He has taken charge of the field work, inspectors and plans for the coming year.

It is planned to introduce a bill into the Legislature this session whereby a commission may be provided for Suffolk County. Public sentiment has been interested in favor of the movement through lectures (illustrated) which have been given and are now being given throughout Suffolk County.

Poliomyelitis clinics will be held through Nassau and Suffolk Counties during the month of February when it is hoped that all of the paralytic cases will again be brought to the clinics for treatment and examination. For the benefit of members who are Health Officers, I would state that a recent decision of the Supreme Court of New York State will permit of the Health Officers requiring a Widal test of all milk dealers and handlers.

A report from Elkins, W. Va., gives thirty-eight cases of poliomyelitis from Dec. 15, '16 to Jan. 8, '17.

A. D. Jaques,
Chairman.

Dr. William H. Ross, Chairman, read a report from the Publication Committee. This was ordered received and filed:

REPORT OF THE PUBLICATION COMMITTEE OF THE LONG ISLAND MEDICAL JOURNAL FOR 1916.

Your Publication Committee for the year, 1916, offers the following report. The cost of the Journal is as follows:

For printing	$2,425.79
Salary of ad. solicitor	1,040.00
Salary of Editor	500.00
For clerical assistance	600.00
For petty cash	59.21
For cuts	65.97
For postage	96.07
Total	$4,187.04
Income from advertising	$4,404.50
The Journal therefore returns to the Society	$ 217.46

Last year the Journal showed a surplus of $203.30. These two years are the only two in the history of the Journal that it has not been an expense to the Association.

The advertising receipts are practically the same as last year. They would have been larger but some of the undesirable advertising has been cut out. More will be done by future committees as fast as it can be, we have no doubt, and the Journal still maintain its financial solvency.

The estimated expense for next year is as follows:

Printing	$3,500.00
Editor	1,000.00
Advertising Agent	1,040.00
Clerical Assistant	600.00
Postage and cuts	200.00
Total	$6,340.00

This necessitates a larger income. It can be had by getting more advertising; or it can be secured by raising the dues to $3.00 per year. The committee believes the latter plan the better. The Journal finished its first ten years last year and celebrated it by paying its own way and has finished the first year of its second decade by paying its own way again, and also returning a surplus to the Treasury of $217.46 but it cannot do so next year and maintain its standard without drawing upon the Society for financial help, and the committee is of the opinion that the best way to obtain this is for the Society to increase its dues to $3.00 a year.

When one considers that the dues of the Association including a good journal are only $2.00 a year he can say that he is getting a good deal for his money. Your committee acts with the feeling that the result of the year's work has been satisfactory, all things considered, and we hope that the Society may decide wisely questions of policy that will steadily raise the standard of its publications.

PUBLICATION COMMITTEE,
W. H. ROSS,
J. M. WINFIELD.

Dr. William B. Brinsmade, Chairman, read a report from the Committee on Humanics. This was ordered received and filed.

REPORT OF THE COMMITTEE ON HUMANICS.

Naval Base Hospital, No. 1, has been organized in this city under the American Red Cross. The physicians are members of the Naval Reserve Corps. The nurses have received their physical examinations and immunity treatments. Supplies to the value of about $20,000 have been placed, ready for immediate use, in a fireproof building erected for the purpose in the navy yard near the hospital. There are 105 persons in the unit. The medical schools throughout the country have pledged themselves to give instructions in military surgery and hygiene to the senior classes.

Your committee has been concerned in forwarding the movement for preparedness.

Signed, W. B. BRINSMADE,
Chairman, Humanics.

Dr. Frederick C. Holden, Chairman, read a report from the Entertainment Committee. This was ordered received and filed.

REPORT OF THE ENTERTAINMENT COMMITTEE.

Westhampton Meeting, June 24, 1916.

Attendance 116.

Receipts.

36 @ $2.00	$ 72.00	
13 @ $3.00	39.00	
67 @ $6.00	402.00	
		$513.00

Expenses.

H. J. Howell	$201.10	
Geo. M. Perry	10.25	
G. F. Griffing	51.00	
Kiefer	40.25	
L. I. Railroad	245.00	
do. Extra fares	15.91	
G. G. Ketcham	15.00	578.51
Deficit		$ 65.51

Long Beach Meeting, October 23, 1916

Attendance 167.

Receipts.

167 @ $2.50		$417.50

Expenses.

Clinical Film Co.	$100.00	
Hotel Nassau	244.50	344.50
		$73.00

Brooklyn Hospital Meeting, January 27, 1917.

Attendance 150.

Receipts	$125.00
Expenses	125.00

Total receipts three meetings	$1,055.50
Total expenses three meetings	1,048.01
Profit	$ 7.49

FREDERICK C. HOLDEN,
Chairman Entertainment Committee.

The Secretary, Dr. James Cole Hancock, read his annual report. This was ordered received and filed.

SECRETARY'S REPORT.

Mr. President: Your Secretary has to report the affairs of the Society as in a most satisfactory state. During the year the Membership Committee has added to the roster 148 names and it may be truly said that in presenting so gratifying a number of applications to the Society practically every member of this Committee contributed his share of effort. Of the names presented thirty-seven are from Queens, Nassau and Suffolk Counties and 111 from Kings County. During the year there have been eleven resignations and eleven deaths. The total membership at this time is 1,022 of which nine are Honorary Members and 1,013 Active Members. Of the latter class 270 are from Queens, Nassau and Suffolk Counties and 743 from Kings County. The usual meetings have been held and have been most satisfactory to the unusually large number of members attending them.

Respectfully submitted,
JAMES COLE HANCOCK,
Secretary.

The Treasurer, Dr. Edwin S. Moore, read his annual report. This having been audited by two members of the Auditing Committee, Dr. Walter Truslow and Dr. Arthur D. Jaques, was ordered received and filed.

TREASURER'S REPORT.

January 1, 1916 to January 1, 1917.

Balance on hand January 1, 1916	$ 138.71
Received from dues	2,091.00
Received from advertising	4,404.50
Received from January dinner	46.00
Received from discount	2.98
	$6,683.19

Expenditures.

A. H. Crist, Printing Journal	$2,425.79

Bal. to Eagle	100.00
H. G. Webster, M.D., Editor	500.00
Stenographer, Miss Shields	600.00
Geo. H. Carley, Postage Journal	96.07
Turner & Wild, Printing	24.50
Cuts for Journal—Whitfield	65.97
N. D. Webster, Salary	1,040.00
Nat. Mercantile Agency	19.00
Ward	1.18
Typewriter	2.00
Envelopes	6.95
J. C. Hancock, Printing for Meetings	339.53
Stenographer for Meeting, Long Beach	16.85
Film Co.	5.00
Kings Co. Minutes	5.00
Kings Co. Medical Society, Postage Jr.	25.50
R. Fowler, M.D., Postage	1.70
E. S. Moore, M.D., Postage	43.46
Dean	3.50
Long Printing	32.25
Smithtown Br. Note	900.00
S. S. Bk. Note	150.00
Discount	6.06
H. G. Webster, M.D., petty cash	59.21
Dinners Eatons Neck	121.00
	$6,590.52
Balance on hand	92.67
	$6,683.19

E. S. Moore,
Treasurer.

The Board of Directors reported to the Society that they considered, with favor, a suggestion made by the Editor of the Long Island Medical Journal, Dr. Henry G. Webster, that the annual dues of the Society be raised to three dollars. The Board recommended this increase because from this time the cost of publishing the Long Island Medical Journal would be increased seventy-five dollars a month and the present income of the society is not sufficient to meet this increase. Upon motion, duly seconded, the Society unanimously decided to raise the annual dues to three dollars.

Dr. William Browning moved, and the motion was duly seconded and carried: that it be left to the Board of Directors to create a special class of membership for those of our old and worthy members who feel the necessity of retiring from active membership, and that this motion be regarded as notice that at the June, 1917, Meeting he would move to amend the By-Laws so as to embody this change.

Dr. James P. Warbasse presented the following resolutions, which were unanimously adopted by the Society and it was ordered that a copy be sent to the family of the late Dr. Paul M. Pilcher.

Resolutions.

In the death of Dr. Paul Monroe Pilcher, the profession of medicine and the public have suffered a great loss. His talents and learning had secured for him a position of recognition in his profession, and his skill and service had won for him a high degree of public esteem.

He had labored earnestly to attain excellence, and had experienced the joy and satisfaction of success. In his own special branch of surgery, he had risen to a position of recognition among the learned in his art.

He promoted the interests of the Associated Physicians of Long Island as the first editor of the Long Island Medical Journal. As a fellow member he was capable, earnest, and ready with information and service.

It is hereby resolved that the foregoing be adopted as the expression of the Associated Physicians of Long Island, here assembled at its annual meeting, that a copy of these statements and this resolution be sent to the family of Dr. Pilcher, and that a copy be placed in the records of the Association.

J. P. WARBASSE.

Dr. Guy H. Turrell moved; and the motion was seconded and carried; that a Committee of Three be appointed by the Chair to investigate with the purpose of ascertaining whether or not the general agitation concerning cancer had resulted in cases of cancer being generally reported earlier than formerly.

Dr. J. Carl Schmuck proposed a vote of thanks to Dr. Edwin S. Moore for his efficient and appreciated services as Treasurer.

The Nominating Committee presented the following recommendations for the positions of officers of the society for the year 1917:

For President	Dr. J. Carl Schmuck, Lawrence, L. I.
For First Vice-President	Dr. Lefferts A. McClelland, Brooklyn
For Second Vice-President,	Dr. William A. Hulse, Bay Shore, L. I.
For Third Vice-President,	Dr. Harris A. Houghton, Bayside, L. I.
For Secretary	Dr. James Cole Hancock, Brooklyn
For Treasurer	Dr. Edwin S. Moore, Bay Shore, L. I.

There being no further business the meeting was adjourned at five fifteen.

JAMES COLE HANCOCK,
Secretary.

EDITORIAL

BIRTH CONTROL.

THE advocates of changes in the law to permit the free dissemination of information on birth control show a disposition that makes one wonder whether they have individually given to the subject the thought that it demands. A committee of ladies have approached Governor Whitman with the request for his immediate cooperation in their campaign and seem to expect that he will of his own initiative immediately bring about the reform they seek. One is reminded of the furore that attended the twilight sleep discussion a year ago; at that time the newspapers and magazines of the country bristled with the threats of certain militant ladies who were insistent that doctors should be compelled by law to give twilight sleep to every parturient woman. We notice that in a very brief space of time the agitation has died out. Some of the names connected with the birth control propaganda are curiously familiar and may be identified with a variety of other recent schemes that were all important at the time but have now lapsed into the limbo occupied by the hoop skirt, peg-top pants, burnside whiskers and other fashions that once were everywhere and are now well nigh forgot.

May we inquire what all this agitation about birth control really means? Is it true, as has been whispered, that somebody has a patented contraceptive article that he is anxious to make commercially profitable and that someone else has an infallible application that he would be glad to see put upon the open market? These whispers are but rumor, it is true, but it is quite pertinent to ask if there is a basis for the rumor. Have the ladies and gentlemen who have interested themselves in the subject ever considered that birth control for the individual may be properly achieved in precisely the same way that pregnancies may be lawfully terminated? Any physician in an individual case, and after proper consultation, could properly place in the hands of his woman patient information that will help to guard her against future pregnancies, provided her health is likely to suffer from them. Gynecologists are quite ready to sterilize patients who are likely to bear children which may prove a menace to the public or to themselves. No one has ever questioned the propriety of such steps, but even though such eminent names as Jacobi and Holt are published as advocating the repeal of laws that have long been on the statute books forbidding the dissemination of general information upon this subject, it will require most careful consideration before the bulk of the thoughtful people of the country can be persuaded to give their unqualified endorsement. This subject goes back to the fundamental principle of the propagation of the species and under no circumstances must be lightly undertaken, for while a considerable number of people could be trusted to use their knowledge intelligently, it is equally true that a great many would hail the discovery as permitting unchecked licentious indulgence. There is in this country today a very large class of utterly selfish people whose only thought is how to shirk responsibility and whose apparent aim in life is the cultivation of an appetite for selfish indulgence. It is true that people of this class can always purchase what they want and most of them, if one judges by their lack of children, have already secured the information which is now demanded in behalf of the uninstructed remainder.

It has been pointed out before in these columns that child-bearing has a great spiritual power in building up the character of both parents, a point which seems to be entirely overlooked in such arguments as the advocates of birth control have so far advised. The bulk of their arguments have been purely utilitarian. Before the Legislature is stampeded by the insistent clamor of Mrs. Sanger and her supporters, it should be informed through an enlightened commission on all possible sides of this momentous question, and it is greatly to be hoped that Governor Whitman will not permit himself to be hurried into any action that he may later regret. H. G. W.

NO PLACE TO BE ILL.

THE superintendent of one of the large New York hospitals states that the rapid increase in apartments and the corresponding disappearance of private homes accounts for the demand for private room accommodations in hospitals. He adds that a private hospital made up altogether of moderate-priced private rooms would be filled almost as soon as completed because apartment dwellers of moderate means find the limitations of small apartments and apartment hotels irksome in time of sickness. As a matter of fact, while this statement expresses in some measure the reasons for the growing demand for private hospital accommodations it applies more particularly to the Borough of Manhattan and in less degree to the other divisions of the greater city, while another factor of greater importance must be taken into consideration in this connection. It is becoming more and more evident to the general public that the "group method" of diagnosis offers them a better return for their money than the usual way; and physicians with a hospital association are learning the converse, that they may arrive at a better diagnosis more readily by taking their patient to an institution where all angles of the case may be studied at once. Economy for the patient means an increased fee for the doctor—not in proportion to the increased service, but yet a definite increase. The need for more diagnostic hospitals is becoming increasingly evident as the appreciation of their value to the community grows. Cooperation along these lines is bound to enhance the opportunities for better diagnostic work by an increasing element in the general profession. One might go a step further and open opportunities for cooperation between the staffs of already established hospitals and selected groups of unattached physicians, especially through out-patient departments. There is need for a general reorganization of most dispensaries if they are to be brought up to their full usefulness. The time has gone by when a five-minute conversation and a sterotyped prescription for the dispensary's "No. 1 Cough Mixture" or "No. 5 Stomach Mixture" can be accepted as adequate treatment. It is of questionable help to the patient and only tends to confirm slip-shod and lazy ways in its physicians. H. G. W.

CORRESPONDENCE.

Dr. Henry G. Webster,
Brooklyn, N. Y.

Dear Doctor:

Your remarks on Health Insurance in the Long Island Medical Journal have interested me, because I am opposed to the bill introduced at Albany, for the following reasons:

First: I object to the medical profession being dragged into the bill and made to work it. If workmen must have Health Insurance and if they get it, they ought to pay their doctors' bills personally, instead of the panel doing it. The vast majority of workmen, now uninsured, pay their doctors promptly, and if insured, would more easily do so. This plan would do away with all bargaining with panels and save money by eliminating the inspecting physician.

Second: This country does not need Health Insurance. Nobody seems to want it. I have questioned many workmen and doctors about it and have not found one who favored it.

Third: The claim is made that no country that has adopted Health Insurance has discarded it. This, I believe, to be because the victims (the doctors) are unable to throw off the yoke.

Fourth: Paying by visitation is objected to by the authors of the bill, on the ground, first, that it would be expensive, and also, second, because the medical expense cannot be calculated in advance. The first objection, that of expense, is a confession that we doctors are expected to work the bill cheaply. That is, we get more work for less pay, while in every line of industry at the present time, the demand is for less work and more pay. The second objection is not valid; for the amount of insurance the insured would get also cannot be calculated in advance.

Yours very truly,

294 Halsey St. F. Siegel, M.D.

EUGENICS AND BIRTH CONTROL.

Editor Long Island Medical Journal.

Sir:

A HUMAN being is a continually changing thing, and is quite different at sixty from what he was at sixteen. During the years after puberty, germs are being continuually given off from this changing individual. Some of these germs develop into new individuals and some do not. There should be no objection to investigating the results derived from germs separated at different stages in these changes. Also, there should be no objection to extending such an investigation through two or three generations for the purpose of seeing if compounding a thing will make apparent something which is obscure in the first stage of the proceeding.

Saying that a person is the last child of a family of ten, fifteen or twenty is definitely locating that person as coming from a germ separated in the later reproductive life of the parent without exactly fixing the point of separation. Saying that a person is the first child of a family of unnamed size is not giving any information on this subject. Dr. Robinson gives the names of several eminent men, each of whom is said to be a first child. It may be well to examine the points of separation of the germs which resulted in these men, as far as those points are known. The average point, at the present time in the northern part of the United States, is represented by a father about thirty-two years of age when the average child is born.

Goethe was born when his father was thirty-nine, and the parents were born when the grandparents were fifty-three and thirty-eight years old, respectively. Each one of these male ancestors was considerably above the average age of fathers at those times.

Herbert Spencer was born when his father was thirty, and the grandfathers were twenty-eight and forty-four respectively. The average of the three is above the normal average.

Schiller was born when his father was thirty-six, and the two grandfathers were forty-three and thirty-five, respectively. Again they are above the average.

John Stuart Mill was born when his father was thirty-three; Newton, when his father was thirty-six; Kant, when his father was forty-one; and Galileo, when his father was thirty-one. In all but the last of these the father was above the average age. I do not have further records in these cases. Byron was born when his father was thirty-two, and the next persons in the male line were thirty-three and fifty-four, respectively. I have no records which tell the points of separation for Luther, Heine, Harvey and Ibsen. In the case of Harvey, however, my record says that he was the second child by a second wife. That indicates a mature father.

To these it may be added that Cuvier, an intellect of the first magnitude, was a first child and was born when his father was fifty-one. Also, that Wedgwood was the thirteenth child and was born when his father was forty-three. Here we have the thirteenth child of one family as an earlier product than the first child of another family.

Judiciously applied, birth control may be used advantageously to change the rate at which births follow each other in the family when that rate tends to become too rapid. What effect it will have upon the average rate at which generations follow each other is another problem. There is definite information as to what effect will be produced upon the race by changing this last rate, but it does not appear that the advocates of birth control have considered that phase of the subject.

Personal questions addressed to a number of comparatively young women with one, two or three chilrden brought forth the expressed determination to have no more. The reasons given were personal convenience, and economic and social conditions. The argument that later children would be superior seemed to have no weight with them. The only exception was my own daughter who reserved decision but who exhibited special interest in the facts bearing on this matter. If the answers to these inquiries are truly representative of conditions, then birth control will profoundly modify the average rate at which generations follow each other. Are we ready to accept such change without a full consideration of what effect will be produced by the change?

Chicago, Ill. CASPAR L. REDFIELD.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting of the Society held Dec. 7, 1916.

The President, JOHN E. JENNINGS, M.D., in the Chair.

Compound Dislocation at the Ankle Joint.

William A. Gillen, M.D.

Seventy-three years, widow, born in U. S.

On Aug. 8th, 1916, slipped while going down three steps unprotected by a hand rail, into a grocery store, landing full weight on left foot. Was brought to St. Mary's Hospital on the service of Dr. John D. Sullivan.

Physical Examination: On the inner side of left foot, there is a lacerated wound about four inches in length, extending from about one inch anterior to the heel forward and lying about one inch below internal malleolus. Through this wound protrude the lower end of the tibia, the astragalus and the scaphoid. The astragalus is disarticulated at all three joints. The articular surface for the os calcis is directed upward and laterally. The articular surface for the ankle joint is directed upward, anteriorly and mesially. The articular surface for the navicular is directed downward, forward and inward. The scaphoid is completely disarticulated, and lies entirely outside the skin, being held by a few filaments of its ligaments.

Operation: Under ether anesthesia, the surrounding skin was painted with tincture of iodine, and the astragalus and scaphoid replaced in their anatomic positions. The torn ligaments were sutured with chromic gut as completely as possible, and the skin closed with a continuous chromic gut suture. The foot was then inverted and placed in a plaster bandage, being first covered with a thick layer of cotton to avoid pressure from swelling. There being no elevation of temperature, this plaster bandage was left on for one week, when it was removed and the part inspected. There were no signs of infection, so a second plaster was applied. In all, four plaster bandages were used, covering a period of five weeks. The foot was then strapped with adhesive plaster and the patient encouraged to walk.

At present, the foot presents no deformity to inspection and there is no perceptible limitation of motion. In the knee of the other leg, the patient has a chronic rheumatism, so that in walking she uses a cane to assist the right leg rather than the left.

Case of Unrotated Colon.

William A. Gillen, M.D.

Male, thirty-four years, married, born in U. S.

On the morning of Aug. 21st, 1916, was awakened by pain in the right lower quadrant of the abdomen, accompanied by vomiting. A few hours later, these symptoms abated sufficiently to allow him to go from his home in Larchmont Manor to New York. After being at business for two hours, the pain returned with such severity that he was barely able to get home. Saw a doctor that evening, who made a tentative diagnosis of appendicitis. On the following morning, he called me up from his home and said that he was coming over to see me. I advised against his taking a trip of that length in the presence of such symptoms, but he insisted. He got as far as the Grand Central Terminal and found he was too ill to complete the trip to Brooklyn, so went to a hotel and notified me. An hour later, I found him with a temperature of 100°F. and a pulse of 110, and complaining a moderate pain in the right iliac fossa. Examination showed a marked tenderness over McBurney's point and considerable rigidity. Operation was advised and done that afternoon at four o'clock. A right rectus incision was made and the fingers introduced into the right iliac fossa. There was no large gut to be found anywhere along the right side of the abdomen. The cecum and appendix were finally located just to the left of the median line and slightly above the umbilicus. The tip of the appendix was the seat of a mild inflammation. The appendix was removed. Not being satisfied that I had found the site of the real trouble, I enlarged the incision and explored the upper abdomen. The free border of the liver and the gall-bladder were located four inches above the fargin of the ribs. They appeared normal to the touch. No kidney could be found on the right side. As considerable manipulation had been done by this time, the abdomen was closed. Since that time the patient has been perfectly well, except for an attack of indigestion following a large dish of clam chowder some five weeks after his discharge.

Compound Dislocation at the Ankle.

William A. Gillen, M.D.

DR. JOHN D. SULLIVAN, in discussion, said:

"I think that Dr. Gillen is deserving of some complimentary remarks on the case which he reported of compound dislocation at the ankle. The result which he obtained was certainly a remarkably good one. I was away at the time and although the case was on my service, I did not see it until it was all over. It was a remarkably good result and I wish to compliment him on the skilful and efficient surgery which he exercised in his management of the case."

Some Cases of Urinary Lithiasis. Lantern Slides.

Nathaniel P. Rathbun, M.D.

DR. PAUL M. PILCHER, in opening the discussion, said:

"Dr. Rathbun has presented a series of studies which are most stimulating, and demonstrates the great care which he has taken in his clinic at the Brooklyn Hospital to diagnose the presence of renal and ureteral calculi.

"He says that the x-ray alone is not sufficient. From a careful study in our own clinic we can second all that he says, and believe that the men of Brooklyn should congratulate him upon the wonderful progress he has made; especially in his Dispensary Clinic at the Brooklyn Hospital."

Paper: "Some Clinical Phases of Periostitis." X-ray Plates.

Joseph P. Murphy, M.D.

DR. GEORGE I. MILLER, in opening the discussion, said:

"The subject of periostitis is a very interesting one, not only from a therapeutic standpoint, but more from a diagnostic standpoint. From a surgical standpoint I would be inclined to say that it rarely exists by itself. It usually is merged with inflammation of the bone, as an osteitis or an osteomyelitis.

"The doctor in his paper stated that the periosteum is a tough fibrous membrane and is adherent to the surfaces of the bone, except over the cartilage-formed extremities. It is a very vascular membrane. On stripping the membrane from the bone bleeding points are noticed, showing the entrance of the vessels from the periosteum through Volkmann's canals into the bone. When the periosteum is diseased it usually strips away from the bone, destroys the vessel and deprives the bone underneath of its supply, with the result that the cells, either superficial or deep, of the bone beneath die or become partly destroyed. It is, therefore, a merging of the periosteum and the bone. When the trauma is of mild degree, the superficial cells of the bone may heal without deep destruction. When the trauma is of such severity that an infection takes place at the same time, the entire periosteum often is stripped from one epiphysis to the other. It is lifted up and is filled with pus. In that instance it is usually forming what I would call an ante-room to the chamber of horrors that we find in the medullary cavity on trephining the bone. In other words, there is rarely a periostitis in itself. Usually there is an osteomyelitis with it unless we think of the idiopathic or inherited forms of periostitis, the results of syphilis. In those cases we have simply a thickening of the periosteum in the form of a node and we find it in cases as young as two years and running up to the age of nineteen years, but usually between the fourth and fifth year.

"In the tubercular form we find that the periostitis is usually in adults and affects the ribs and the vertebrae. In those cases it does not remain confined to the periosteum, but, as a rule, it eats away the cells of the rib so that the rib becomes thinner and is worm-eaten in appearance. When it involves the vertebrae it usually attacks more than one vertebrae and often forms abscesses.

"In cases of traumatic ossifying periostitis it usually impairs the function of the limb.

"If as the result of a blow with a hammer or other injury over a phalanx the history is not clearly gone into, we find there is impairment in function of flexion and extension and thickening of the joint we may conclude that a traumatism has taken place which was not elicited at the time of the taking of the history.

"Those affections usually occur in adults of middle age. Lines must be excluded.

"In cases of suppurating periostitis it always suggests the advisability of not only cutting down to the bone, but also of trephining the bone itself and opening the medullary canal and, as Dr. Murphy states, it is safer to err by trephining through the bone and opening the canal than to take the risk of simply incising the periosteum and evacuating the pus."

Dr. John D. Sullivan, in discussion, said:

"Dr. Murphy's paper is a very interesting and instructive one and I would like to say a few words about one phase of it, namely, that type of cases of periostitis in which the bone becomes dense, and the medullary canal obliterated. I have been very much interested in that form of inflammation. It is usually the result of osteomyelitis rather than periostitis. It is a very, very painful disease and a disease which is very difficult to control. I do not know that its pathology is described in any of the literature; at least I do not remember reading about it, but I have come to the conclusion that it is purely a chronic osteitis in which the cancellin tissue is obliterated with a proliferation of the fibrous tissue until one becomes as hard and dense as a piece of ivory. Sometimes it is enlarged; sometimes it is diminished in size. I have frequently compared it to a cirrhosis of the liver. I call it a fibrosis of the bone. I saw one case in which a trephine button was removed in order to allow the space to fill up, with a blood clot in the hope that it would develop a new center of nutrition, but it failed absolutely, although the blood clot became organized. The only treatment I saw do any permanent good was to cut out a long piece of bone to give room for expansion. I do not know of any positive treatment that will cure it. My case came to amputation on account of that condition in the tibia."

Dr. Mathias Figueira, in discussion, said:

"In speaking of malignant disease it is essential that we should make a distinction between cancer and sarcoma. It is not proper to speak of cancer when we mean sarcoma and sarcoma when we mean cancer.

"Now, there is no doubt that sarcoma may be due to trauma. This opinion is supported by the testimony of many great surgeons at present, particularly the late lamented Dr. Murphy of Chicago, a man of vast experience. He has told us that he has repeatedly seen sarcoma arise from injuries that were not very great.

"In regard to cancer: the fact is worthy of note that the parts of the body that are most subject to cancer are those most exposed to injury; for instance, the woman's breast, so prominent and so easily exposed to blows and hurts and bruises; man's stomach, so often subject to injuries from eating or drinking improper and irritating food; the womb, so often subject to the injuries and irritations of labor and other pelvic injuries; the rectum, which is so often subject to the irritation of constipation and other conditions—and many similar examples. From such consideration and the fact that so little is known of the cause and nature of cancer, I do not believe one is justified in denying trauma as a cause of cancer."

Dr. William B. Brinsmade, in discussion, said:

"There is just one word on the subject of cancer and trauma. I am not prepared to accept the proposition that cancer anywhere in the body, whether sarcoma or carcinoma, is caused by trauma. As you know, in Norway and Sweden and Germany, where workmen's compensation has reached a stage of development which it will probably reach in this country, that question has been very widely discussed and one can get in the journals almost any opinion he wants on the subject, but that cancer anywhere in the body is caused by trauma in the way of a single blow is not yet proven and I think it is going to be a very important point because the medico-legal aspect of it is something that is going to be put before a great many of us.

"You will perhaps recall (although this is a little wide of the subject) a case in which a servant girl was struck by a small girl, eight years of age, in the breast and six months later developed cancer of the breast and suit was brought against the family and a verdict of some $10,000.00 awarded on the expert testimony of one or two men that cancer was caused by trauma. That seems an exaggerated case to most of us, but it brings up a big question which I do not want to go into now. But, I am not prepared to accept the proposition that if this were sarcoma of the bone it was caused by trauma."

Dr. Henry F. Graham, in discussion, said:

"In contradistinction to what Dr. Brinsmade has just said I would like to say that this morning in reading Murphy's last Clinics, I came across the statement that sarcoma is usually caused by a single trauma of medium serevity, whereas carcinoma is never caused by a single traumatism except in the breast."

Dr. Joseph P. Murphy, in closing the discussion, said:

"In the last plate shown I saw the man immediately atfer the injury and I saw him frequently up to the time that the x-ray picture was taken. There is no doubt but that the exostosis is the direct result of the trauma. Dr. J. B. Murphy, of Chicago, stated that cancer is most frequently caused by slight trauma. In the boy the trauma was comparatively slight with the sequela of sarcoma. Dr. Williams said it even looked like sarcoma in the x-ray picture. It went on for five years. Sarcomata generally are quick growths and more painful than this. This was of five years' duration, yet the microscopic examination showed sarcoma. In the other case you will notice that the callus is of recent formation. It is embryonic, as it were, but I presume it will harden and if that be a sarcoma there is no doubt that it is due directly to the result of trauma, and it is only fair to him as he is a compensation case to assume that his sarcoma is the result of the injury.

"In the paper it is stated that periostitis and osteitis are grouped under the heading of osteomyelitis. They are so intimately connected with one another that the inflammation of one naturally brings about an inflammation of the other. One cannot have an osteitis and periostitis without having, specifically speaking, an osteomyelitis."

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

FEBRUARY, 1917

MEDICAL SOCIETY OF THE COUNTY OF KINGS. STATED MEETING, FEBRUARY 20, 1917.

The President, Dr. Albert M. Judd, in the chair. There were about 225 members present. The meeting was called to order at 8:45 p. m. On motion of Dr. William F. Campbell, unanimously carried, the reading of the minutes of the previous meeting was dispensed with.

Scientific Session.

Paper: "Acute Pancreatitis: With a report of 30 Cases." By William Linder, M.D.

Discussed by Drs. Wm. H. Rankin; W. L. Duffield; E. H. Fiske.

Paper: Discussion of Certain Border-line Problems:

(a) Cholecystectomy vs. Cholecystostomy.
(b) Treatment of Gastric and Duodenal Ulcers.
(c) Relationship of the Thyroid to Exophthalmic Goitre.

By George W. Crile, M. D.,
of Cleveland, O.

Discussed by Drs. J. B. Bogart, R. S. Fowler, E. H. Fiske, W. J. Cruikshank, R. W. Westbrook, H. A. Fairbairn, L. Louria.

It was moved, seconded and carried that a vote of thanks be extended to Dr. Crile.

Report of Council.

The Council reported favorably upon the following applications for membership:

Edward M. Child, 904 St. John's Pl.; N. Y. Univ., 1877; proposed by J. W. Ingalls; seconded by F. C. Eastman, Dec. '16.

John C. Hamilton, 6120 20th Ave., Vanderbilt Univ., 1903; proposed by S. J. Post; seconded by Membership Committee, Oct. '15.

Joseph Katz, 287 Hinsdale St.; L. I. C. H., 1914; proposed by J. B. Kanter; seconded by M. J. Dattelbaum, Dec. '16.

Applications for Membership.

Applications for membership were received from the following:

Vito Caronna, 31 Jefferson St., Univ. Naples, 1907; proposed by P. Virdone; seconded by R. S. Fowler, Feb. '17.

Paul C. Fleri, 264 Union St., Albany Med. Coll., 1913; proposed by G. De Yoanna; seconded by A. De Yoanna, Feb. '17.

Henry J. Goubeaud, 518 Carlton Ave., L. I. C. H., 1890; proposed by A. M. Judd; seconded by Membership Commitee, Feb. '17.

Mattio Siragusa, 208 Melrose St.; Univ, Palermo, 1905; proposed by P. Virdone; seconded by R. S. Fowler, Feb. '17.

For Reinstatement.

Wm. H. Bayles, 92 Gates Ave.; P. & S., N. Y., 1906.

Richard M. Mills, 193 Fenimore St.; Queens, 1907.

Edward S. Norton, 284 Hawthorne St., L. I. C. H., 1908.

The following resolution offered by Dr. John C. MacEvitt was unanimously carried:

WHEREAS: No previous age ever knew so calamitous a condition as that which now exists, horrors inconceivable multiplying, and our own land being on the verge of compulsory participation in terrorizing war, it behooves us as patriotic citizens to take cognizance of the difficulties which encompass our executive, President Wilson, in his efforts to preserve peace; and by our moral influence to loyally second his efforts; therefore be it

Resolved, That we, the members of the Medical Society of the County of Kings, State of New York, numbering nine hundred, and representing almost every nationality, desire to express to him our admiration for the judgment and patience he has exhibited in dealing with momentous foreign affairs; our confidence in his ability in the future to sustain the honor of our country in a manner to win the support of every citizen; and to pledge ourselves to stand squarely and unequivocally by him in every measure he may adopt for our country's safety. While we hope and pray for peace, we hold ourselves in readiness to actively participate in the defense of our land when his voice declares the peril of our need.

It was moved by Dr. William F. Campbell, seconded and unanimously carried that

WHEREAS: The one hundredth anniversary of the organization of the Kings County

Medical Society will occur in 1920 and

Whereas: It is none too early that fitting ways and means of celebrating this event should be devised,

Therefore be it resolved, That a committee consisting of the Ex-Presidents of the Society be appointed by the President to take the matter under consideration.

The following resolution offered by Dr. Alfred Bell, was unanimously carried:

Whereas: The American Association of Medical Milk Commissions is to hold its annual meeting in Brooklyn, the first week in June, and;

Whereas: Your Milk Commission is a regular committee of the County Medical Society,

Therefore, be it resolved, That the Medical Society of the County of Kings invite the American Association of Medical Milk Commissions to be their guests, and extend to them the privilege of holding their conferences in the Society Building.

Meeting adjourned at 10:50 p. m.

Lewis P. Addoms,
Asso. Secretary.

LONG ISLAND
MEDICAL JOURNAL

VOL. XI. APRIL, 1917 NO. 4

A CONSIDERATION OF CANCER OF THE LARGE BOWEL.*

Charles H. Mayo, M.D.

Rochester, Minn.

PREVIOUS to 1900 operations on the colon were comparatively rare; the mortality was high and results far from satisfactory. Within the past ten years, however, our knowledge of diseases of the colon has greatly increased; surgical measures for the relief of certain of them have been made safer as well as more thorough, and the mortality has been lowered. Harrison Cripps in 1913, in considering cancer of the rectum, reported an operability of hardly 25 per cent in 430 cases. In this country, due to the increased knowledge of malignant disease of the large bowel and to the fact that patients are now seen earlier, there has been a gain of nearly 50 per cent of operability. In our clinic the former operability of 53 per cent has advanced to 71 per cent within a few years. When we consider that the operative mortality is nearly 50 per cent lower, that in cancer of the rectum five-year cures have increased from 10 per cent to 35½ per cent since 1900, and that in cancer of the right colon the five-year cures are now 54 per cent, including the natural death rates for period and age, we appreciate the enormous saving from death and from disease attended with so much suffering.

Within recent years there has been added to the surgeon's work the treatment of non-malignant disease of the colon, such as chronic local and general diseases attributed to intestinal toxemia; also that of chronic constipation and malposition of the colon, especially sagging of the transverse colon. The experience derived from such cases added to that gained from the surgery, which, for lack of a more expressive word, I will call legitimate surgery of the bowel, i. e., the surgery of tumor, diverticulitis, cancer and obstruction, has developed many points of exceeding interest.

In its development the large bowel is formed on the left side of the spine and rotates around the superior mesenteric artery as an axis, the cecum being under the stomach at the third month of fetal life, then under the liver, finally reaching the right iliac fossa. Such a rotation leads to the observation that all structures necessary to the vitality of the organ are to be found in the inner leaf of its mesentery, the outer leaf is merely attached to the parietal peritoneum, the separation of which along the line of adhesion immediately mobilizes the colon without injury and greatly simplifies operations on it. It is noted that there is great variation in the length of the intestines, both large and small, the total length varying from 12 to 33 feet, or from the short carniverous to the herbiverous intestine. Metchnikoff laid much stress on the fact that the absorber of liquids is the colon, that the contents of the small intestine, after removal of 90 per cent of the protein food value, are delivered to it in a liquid state. It is also shown that the peristalsis, unlike that continuous form seen in the small intestine, is sudden, active and intermittent, occurring from two to possibly six times in twenty-four hours in the right colon when the absorption of liquids reduces the mass to proper consistency. The lymphatics play little part in this absorption; it is principally a filtration into the portal venous system for purification in the liver. Years ago W. J. Mayo pointed out that the removal of the right half of the colon relieved constipation, and later observations show this to be due to the loss of the large absorbing surface. The retention of fluids could be compared in effect to an enema given at the top of the remaining large bowel. There has been sufficient surgery for the relief of the non-malignant or toxemic conditions of the large bowel to show that constipation is merely one of the symptoms, and that its relief is not necessarily a cure of the general condition of the individual.

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*Presented before the Brooklyn Surgical Society, Brooklyn, N. Y., Feb. 1, 1917.

As the colon naturally harbors several varieties of bacteria a considerable part of the bowel movement is due to the growth and activity of some of them, and because of such bacteria there is an added danger of peritoneal sepsis in operating on the organ. The suture lines must be both gas tight and water tight. Tension unrelieved on these suture lines, no matter how perfectly they are constructed, will cause them to give way to necrosis after two days of pressure. Fortunately such tension seldom occurs, yet safety valves for immediate or secondary use in delivering gases are of great advantage when needed. Thus suture operations on the left half of the colon or transverse colon may be protected from some gas pressure by an appendectomy, and in the removal of the right half, the end of the transverse colon may be incorporated in the closure of the abdominal incision, projecting through the peritoneum into the muscle, to be opened if needed. This is necessary in approximately 20 per cent of cases. Bloodgood similarly applies the ends of the bowel into the abdominal incision after resection of the sigmoid with lateral anastomosis of the bowel. The same result is accomplished when tubes are passed high into the colon through the anus where they are maintained for several days.

Because of the septic character of the contents of the large bowel the lymphatics have been nearly eliminated from the mobile organ; they are very few and inactive as compared with those of the small intestine, and practically can be considered as connected only with the outer surface. This is of great importance as it shows why malignant disease remains local for such long periods. Thus autopsy findings in death from cancer of the colon prove that the disease was still local in more than half of the cases, death being due to obstruction, perforation or peritonitis. Very extensive operations are indicated if the disease is local, and it is to be considered local if there is only contact involvement. If the growth has become attached to the bladder the attached portion of the bladder should be removed; if attached to the uterus, a hysterectomy should be done. It may be necessary to remove one or two loops of small intestine, or the prostate or seminal vesicles in order to do a thorough operation. On the other hand, if there are grafts at a distance on peritoneum or intestine, or if there is distant glandular involvement or secondary growths in the liver or other regions, no radical operation should be attempted to relieve obstruction. If an operation is done it should be palliative only.

Cancer of the rectum below the peritoneum, being fixed, receives greater traumatism from the harder fecal masses than occurs in the movable part of the bowel within the abdomen. Here lymphatics are actively concerned in the transmission of disease, and in the inch and a fourth of the anal canal there is a double lymphatic return. The disease occurring in this region (epithelioma) is fortunately of the slower cell growing type; only 6 per cent of the cancers of the rectum are found in this short outlet; 24 per cent occur between this point and the peritoneum, while the greater number extend from the lower rectum to the upper rectum or rectosigmoid and are of the adenocarcinoma type.

Perineal operations are often advisable in cancers of the lower rectum. The majority of the cancers are higher, and abdominal exploration is nearly always advisable to determine the extent of the disease and the method of procedure indicated. Thus the ill-advised radical procedure is avoided when cure is impossible. Colostomy is not such a serious inconvenience when it can be carefully made without the urgent necessity of acute obstruction; an uncontrolled perineal outlet when the sigmoid loop is also lost is far worse.

(For discussion see p. 163)

A REVIEW OF ANAESTHESIA IN OBSTETRICS.*

John Osborn Polak, M.Sc., M.D., F.A.C.S.,
Harvey B. Matthews, B.Sc., M.D.

Brooklyn-New York.

AMONG the many contributions to surgery, none has exerted a more beneficial influence towards its improvement and progress than the introduction of anaesthesia for the relief of pain incident to operative procedures. No less important, at least from the obstetricians' point of view, has been the application of anaesthesia to the ordeal of childbirth. Sir James Y. Simpson, as early as 1847, speaking in defense of painless labor, said that "pain in excess is destructive, and even ultimately fatal, and the great pain accompanying parturition is no exception to this general pathological law."

If this be true, is it not demanded that we shall employ those means at our command for the alleviation of pain incident to childbirth?

In former years many reasons were advanced by laymen, physicians and clergy against the unnecessary employment of such agents and even today there are those among us who deny the necessity of ameliorating the pain of childbirth. But notwithstanding this opposition during the past seventy years, many drugs have been used for this purpose, each of which has had its supporters, but the ideal agent is at present unknown.

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* Also published in the American Year Book of Anaesthesia and Analgesia.

Of the many drugs employed as anaesthetics or analgesics during labor, ether was the first. Sir James Y. Simpson, who early recognized the advantages of an anaesthetic in major surgery, could see no reason why the pain of parturition could not be lessened or even abolished by anaesthesia without interfering with the natural course of labor. This he accomplished in January, 1847, when he confined the first woman ever delivered under the influence of an anaesthetic.

In November of the same year, he began the use of chloroform in obstetric practice, and from the year 1853 when it was administered to the Queen of England, "Chloroform a la reine" has remained even to the present day, the universal agent for the relief of pain during the later stages of labor.

Besides Simpson in Edinborough, Dubois and Deschamp of Paris, wrote in 1847, about the use of ether anaesthesia in labor. During the same year, Morton and Keep, in Boston, employed ether inhalations during labor. Pajot of Perrin, in 1854, wrote of the advantages of chloroform inhalations for the relief of pain during childbirth. While in 1878, Pinard wrote an elaborate monograph entitled "The Comparative Action of Chloroform, Chloral, Opium and Morphine on Women in Labor," and many of his deductions still remain unquestioned, from his experience he concluded that chloral was of little value, and that while morphine was frequently useful, its results were not so satisfactory as those of chloroform. Chloral stopped the labor every time; morphine only occasionally.

Paul Bert, in 1878, recommended nitrous oxide, if given with oxygen, for long anaesthesia, but it remained for Klinkowitch of Petrograd in 1880 to demonstrate its efficacy for the mitigation of pain incident to labor. Doederlein in 1886, refers to the use of nitrous oxide and oxygen in obstetrics, but he only employed it to obtain surgical anaesthesia. This method of anaesthesia then apparently disappeared from general use until Webster of Chicago in 1905 used nitrous oxide and oxygen to obtain surgical narcosis in certain abnormal obstetric cases, notably Caesarian Section. Later Webster and his associate, Lynch, of Chicago, began the use of nitrous oxide and oxygen as a routine measure for the relief of pain during labor, *i. e.*, to produce analgesia or obstetrical anaesthesia.

In 1885, cocaine in solutions of varying strengths was applied to the cervix and external genitals, by Doleris and others in France, for the purpose of lessening labor pains. In the same year Tuffier and Malartic used cocaine and later stovaine, intraspinally for the relief of pain during childbirth. These methods proved unsatisfactory, for aside from the danger of the drugs themselves, the analgesia only lasted from one to one and a half hours.

In 1902, Schneiderlein, and in 1903, Steinbüchel, began to employ morphin-scopolamin for anaesthesia in obstetrics. Since these men published the reports of their work, there has been more or less activity in this field. In 1906, Krönig and Gauss reported their first series of five hundred cases of morphin-scopolamin analgesia and from that time the method has been the subject of discussion and investigation in all parts of the world, particularly in America during the past year.

Other agents which have shared in the universal efforts of the profession to lessen the pain of labor, are pantopon, first used by Jaeger of Kiel, in 1910; heroin first used by Kapp of San Jose, California in 1912; and finally tocanalgine—morphineless morphin—introduced by Prof. Dessaignes of Paris in 1914.

ETHER AND CHLOROFORM

Ether and chloroform were introduced into obstetric practice by Sir James Y. Simpson, of Edinborough in 1847. At first they were administered only during the passage of the head over the perineum or for the application of forceps or other obstetric maneuvers. Their safety was insured because of the small amount of anaesthetic given. In fact, only analgesia, with perhaps a certain degree of amnesia, *i. e.,* obstetric anaesthesia, was attained. Rarely surgical anaesthesia. *i. e.,* total obliteration of consciousness, was employed for the more difficult obstetric operations. Following this limited use of ether and chloroform, there came a time when there seemed to be no limitation to the use of these agents, for "Chloroform a la reine" was given by Snow for thirty-one hours; by Prothern Smith for twenty-eight hours; and by Simpson for fourteen hours, without endangering the life of mother or child. However, in more recent years, since the action of ether and particularly that of chloroform upon the various excretory organs, especially the liver and kidneys, has been better understood, the use of these agents has gradually become restricted to the later part of the second stage of labor. Furthermore, it has been conclusively demonstrated that chloroform and ether anaesthesia predispose to post-partum hemorrhage. Graham, quoted by Lynch, has shown that the placental transmission of chloroform plays an important role in the causation of hemorrhagic diseases of the newborn. Again prolonged anaesthesia, or too deep surgical anaesthesia, endangers the life of the child in direct proportion as the mother's life is jeopardized, and is therefore, not without considerable danger to the child in a certain percentage of the more complicated cases. The technic of the administration of ether and chloroform is simple. Ether given to the desired stage of anaesthesia by the "drop method" is the ideal form of administration. When given in this manner ether may be begun when the head is bulging the perineum and continued throughout the remainder of the second stage of labor. Chloroform may be given for a much longer period of time, for by keen judgment, analgesia may be established with the *crescendo* of each pain, the patient immediately regaining full consciousness. This procedure is repeated with the beginning of each uterine contraction. Given in this manner "Chloroform a la reine" may be administered with apparently perfect safety for several hours, *i. e.,* one to three.

NITROUS OXIDE AND OXYGEN

Klinkowitch of Petrograd in 1880, was the first to use nitrous oxide gas and oxygen in obstetrics. He employed this method of producing analgesia during the latter part of the first and throughout the second stage of labor. His best results were obtained by a mixture of eighty parts of nitrous oxide gas and twenty parts of oxygen.

Three to four inhalations of this mixture at the beginning of a uterine contraction produced perfect analgesia but did not cloud the consciousness to any great extent. There was no diminution in the force and frequency of the uterine contractions, but on the contrary, they were apparently stimulated. This Klinkowitch accounted for by the fact that since the woman felt no pain, she "used the pain" to better advantage, thereby terminating the labor more quickly.

The maternal and fetal pulse were not altered at any time during the administration of the gas-oxygen mixture.

This method of obstetric anaesthesia was apparently forgotten for nothing was written regarding it until Webster in 1907, and Lynch in 1913, revived the use of nitrous oxide and oxygen in obstetrics. Webster first employed a mixture of ninety-five to ninety-seven per cent nitrous oxide with three to five per cent oxygen for anaesthesia in forceps deliveries, versions and repair of perineal lacerations. Later he extended its use to cases requiring Caesarian Section. Still later, *i. e.,* in 1913, Webster and Lynch began its use as a routine for producing analgesia during the second stage of labor. As Lynch very aptly says, "it is essentially the method of 'Chloroform a la reine' with a safe drug which acts infinitely quicker, is not irritating, and from which recovery is almost instantaneous."

The chief advantages claimed for this form of obstetric anaesthesia are:

1. The apparatus for its administration is simple and may be used by any physician, at home or in a hospital, with perfect safety;
2. It is under absolute control at all times and can be discontinued at any moment;
3. The force and frequency of the uterine contractions are not altered;
4. It shortens the duration of the second stage of labor;
5. It insures better relaxation of the pelvic floor and hence there are fewer lacerations;
6. It does not predispose to post-partum hemorrhage;
7. There are no ill effects to mother or child;
8. There is a rapid return of the patient to full consciousness with a "clear mind and a light heart."

The dangers of nitrous-oxide oxygen anaesthesia are practically nil. Asphyxiation, the only danger when using nitrous oxide gas alone, can be perfectly controlled by the admixture of oxygen. Thus far no lesions in the newborn have been attributable to this method of anaesthesia.

The most enthusiastic adherents of this method of analgesia believe it can be given for long periods of time, but so far, six hours is the maximum time for which it has been employed. (Lynch) It is essentially, at least at the present time, a late first stage and a second stage procedure, having as its chief advantage, absolute safety for both mother and child.

The technic is simple provided a standard make, new model apparatus is used. Such an instrument insures not only a thorough mixture of the two gases, but maintains an even volume and pressure, which is absolutely essential to the proper administration of the gases. The nasal inhaler, such as is used by dentists, gives the best results, for with this inhaler a minimum amount of the gases is wasted. With the ordinary face mask inhaler, as used by the general anaesthetist, a large percentage of the gases is wasted, thereby unnecessarily increasing the cost of administration.

With the beginning of a pain, pure nitrous oxide gas is turned on and the patient is told to breathe deeply and rapidly. Four to six inhalations usually suffice to produce analgesia. Once established, analgesia may be maintained by admixing oxygen, three to ten per cent with the nitrous oxide gas until the end of the pain. This maneuver is repeated with each pain until the head is about to pass over the perineum, at which time deeper anaesthesia may be superinduced. More or less oxygen to maintain a good color, can be given as required. Ordinarily, the cost per hour of maintaining analgesia by this method varies from $1 to $2.

MORPHIN-SCOPOLAMIN.

Morphin with scopolamin was first introduced into obstetrics by Schneiderlein in 1902, and developed by Von Steinbüchel in 1903. It was subsequently used by Kronig, Pankow and Gauss with varying success. The advantages of morphin-scopolamin amnesia as recognized today are, that in a labor already established, amnesia can be continued throughout the first stage without interfering with or prolonging the labor. Morphin and scopolamin are distinctly first stage drugs, and while they have no effect in lengthening the first stage, they do definitely increase the duration of the second, and increase the danger of fetal asphyxia if the second stage is allowed to continue too long. To the mother, moderate use of either drug has no serious effect. They tend to diminish the shock of labor and favor speedy convalescence. Their employment should be limited to the first stage, after labor is definitely established. They should never be used when there is a question of dead child, in primary uterine inertia, or in the presence of the accidents of pregnancy or labor. It is perhaps in heart diseases and tuberculosis that the greatest benefit will be derived from the use of these drugs in labor. The technic is simple but demands that the administration be under the guidance of a trained operator. The patient should be placed in a room by herself, the room darkened, her ears plugged, and her eyes bandaged, and when the pains are strong and regular, recurring at five-minute intervals, and the cervix is the size of a twenty-five cent piece, the first dose is given, using one-fourth grain of morphia or one-half grain narcophen and a 1/130 grain scopolamin (Hoffman La Roche). One hour later the patient is given 1/200 grain of scopolamin, and one hour later, 1/400 grain. If the amnesia is complete, as it usually is by the third dose, as shown by her lack of recollection of the previous needle punctures, the scopolamin may be repeated at from two to four-hour intervals, in 1/400 grain doses. The fetal heart must be constantly watched, particularly in the second stage, as narcotized infants bear the trauma of labor badly.

PANTOPON.

Sahli, of Berne, discovered pantopon in 1909 and recommended its use instead of opium and its derivatives. It is a mixture of the soluble chlorides of opium and is freely soluble in water. It contains nearly 90% (89.77%) of all the alkaloids of opium and is about five times as active. The average dose of pantopon is one-third grain.

Jaeger, of Kiel, in 1910, first used pantopon for the purpose of allaying the pain of parturition. He reported fifty labors, twenty in which pantopon alone was used, and thirty in which pantopon and scopolamin in combination were given. The dose given in these cases was one injection of a 0.5 to 1.0 c.c. of a two per cent solution of the drug, *i. e.*, one-sixth to one-third grain either alone or in combination with 1/150-1/200 grain of scopolamin. Jaeger observed that when given alone pantopon only decreased the sensitiveness of the labor pains, while in combination with scopolamin it produced a "twilight sleep" with complete analgesia and amnesia.

Jaeger along with Aulhorn, Kolde, Zeller, Esch and others, recommend the administration of pantopon as soon as the pains have become strong and recur at regular intervals. Morley, of Detroit, however, believes it is best given with the beginning of the second stage of labor.

According to these authors, the most noteworthy advantage in the use of pantopon lies in the fact that it is absolutely harmless to the child. Other advantages that deserve mention are:

1. It is freely soluble in water and is not irritating to the subcutaneous tissues;
2. In combination with scopolamin it produces complete analgesia and amnesia in from sixty to seventy per cent of cases;
3. It has no unpleasant after-effects to mother or child;
4. It can be used at the home or in the hospital with equal safety.

From a study of the published reports on the use of pantopon in obstetrics, there appears to be no danger from its use, except when given in very large doses, *e. g.*, 2/3-1 grain. In such doses the child may be born in a state of apnoea but can invariably be made to breathe within a few minutes.

Pantopon may be used in every case of labor not presenting grave complications. According to Esch, it should not be used in cases of primary uterine inertia or when quick delivery is desired. It should be used with caution in lung complications, disturbances of the circulation, general and febrile diseases, chronic kidney disease, syphilis and premature deliveries.

The mode of administration is by hypodermic injection. One c.c. of a two per cent solution, *i. e.*, 1/3 grain, should be given as the initial dose. From one to three injections may be given. Usually one injection is sufficient to produce analgesia, particularly when used in combination with 1/150 grain of scopolamin. The desired effect is obtained in from twenty to thirty minutes and lasts from one and one-half to two hours or longer. Esch has recommended much smaller doses of pantopon and scopolamin, but repeats the injections more frequently, each time using a smaller dose of the drugs. The results are apparently no better than by the older methods of giving larger doses.

HEROIN.

Kapp, of San Jose, California, in November, 1914, reported "about 100" cases of labor in which he used heroin hydrochlorate to lessen the pains.

Moderate analgesia without amnesia, is the object of this form of treatment. Between pains the patient sleeps lightly but can be easily aroused. When awakened she is perfectly rational but immediately falls asleep again.

The chief advantages claimed for this method of producing "painless labor" are:

1. The family physician can use it with perfect safety in the home;
2. The second stage of labor is shortened, because due to the lack of pain, the patient uses her expulsive forces to better advantage;
3. It reduces post-partum shock by giving the mother a few hours sleep following the labor;
4. It does not predispose to post-partum hemorrhage;
5. It is absolutely harmless to the baby.

In the experience of the author, there is no danger in the use of heroin either to mother or child. He recommends the drug unreservedly for all uncomplicated cases of labor.

The first injection of 1/12 grain is given when the pains are strong and recur at regular intervals. Within twenty minutes the patient becomes drowsy and "no longer feels the sting of the pains." The initial dose is effective for from two to three hours. Repeated doses of from 1/24 grain to 1/36 grain may be given whenever needed, *i. e.,* when the patient feels pain. Rarely more than one or two doses are needed.

Tocanalgin.

Tocanalgin, the so-called "morphinless morphin" is a substance obtained by the action of certain living ferments on the chlorhydrate of morphin. It is therefore a hydration product of morphin but exhibits none of the characteristics of morphin. Its toxicity is about 1/15 that of ordinary morphin, and, it is hence vastly safer. It was first isolated by Paulin, a French chemist, who recommended it as a substitute for morphin, maintaining that its power to produce analgesia and amnesia was in every respect equal to that of morphin.

Prof. Ribemont Dessaignes, of the French Academy of Medicine, was the first to use this new drug, tocanalgine, in obstetrics. In July, 1914, he reported 112 labors in which this agent was used to produce analgesia and amnesia. Seventy-five per cent of the 112 cases had complete analgesia, 22% showed partial analgesia, and 3% were not in any way affected by the drug.

There were 115 babies, 77 of which cried spontaneously; 28 were born in a state of apnoea, but cried in a few moments; one was born dead but the fetal heart could not be heard previous to the administration of the drug. The remaining nine were more or less asphyxiated when born, but after respiration was established, they progressed as normal babies.

The advantages claimed for tocanalgine are:

1. Its lessened toxicity as compared to morphin;
2. It has no effect upon the uterine contractions;
3. The temperature and pulse remain normal following its administration;
4. Lactation is not interferred with;
5. Involution is normal;
6. It does not predispose to post-partum hemorrhage;
7. Versions, forceps and perineal repairs do not require further anaesthesia;

8. Seventy-five per cent of the labors are rendered painless, with no after-effects to the mother.

The dangers of tocanalgine are chiefly for the baby. Notwithstanding the fact that it is 1/15 as toxic as morphin, yet it is toxic enough to produce oligopnoea in a certain per cent of the babies. Furthermore, it prolongs the second stage of labor, but just how much is not definitely stated.

The method is applicable to all normal cases of labor but should not be employed where there is any likelihood of complications.

Tocanalgine may be given when the uterine contractions are strong and recur at regular intervals—the cervix two or more fingers dilated, or at any time during the second stage of labor. Unlike morphin and scopolamin, it may with safety be given only a few minutes before the birth of the child.

The dose for the first injection is 1-1/2 c.c. For subsequent injections, 1/2 to 3/4 c.c. is the usual dose. Repeated doses may be given whenever the uterine contractions become painful. From one to three injections may be given. Usually one is sufficient.

From the foregoing review, the following conclusions may be formulated:

1. It must be admitted that the ideal obstetric anaesthesia has not been discovered.
2. The prolongation of the second stage of labor by any method is disastrous to the child and this is particularly true of the morphine group of drugs.
3. Various combinations of the drugs at our disposal for the production of obstetric anaesthesia, have certain definite advantages, *e. g.*, pantopon with scopolamin, or morphine with scopolamin to carry the patient through the preparatory stages, and when it seems necessary, chloroform, ether or nitrous oxide gas during the perineal stage.
4. At the present time, morphine-scopolamin anaesthesia for the first stage and nitrous oxide gas for the second stage of labor, would seem to be the best combination.
5. From a study of this subject, it would seem that institutional obstetrics must be accepted as a recognized specialty, and that the judicious use of anaesthesia, though not without its dangers, is destined to be classed among the obstetric arts.

THE BACTERIOLOGY AND PROBABLE MEANS OF SPREAD OF POLIOMYELITIS.

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THE bacteriology of poliomyelitis has been of gradual development and, in view of what is now known, and the records in the literature many experimenters of past years have undoubtedly isolated and partially described the organism causing the malady. * Others, thinking to exclude possible contaminating organisms (such, that, while they might be found in at least some of the diseased tissues, had nothing to do with the causation of the malady) determined that the responsible organism could pass through laboratory filters and, as they then believed that all bacteria of the size of those familiar to the laboratory would be held back by such filtration, they declared that all work in which the poliomyelitis microbe was described as of similar dimensions was to be "cast aside." One prominent bacteriologist wrote that this fact "disposed finally of the claims made for the above mentioned bacteria" and described his own work as having "yielded results of an entirely different order."

Several writers, within the last year or so, have described the organism as a streptococcus, one in particular seemingly attempting to prove that it was an ordinary streptococcus which had developed special affinity for the nerve centers.

At first thought, the possibility that such apparently conflicting reports, in so far as the facts which they give are concerned, could be all true and reconcilable would seem absurd, yet I think evidence is at hand that indicates this.

There was decently described a series of experiments † made with cultures from the brain and cord tissue of cases of our 1916 epidemic, in which it was shown that an organism, obtained in pure culture, could be cultivated in serum as what was apparently a Gram-positive streptococcus. That by a special method, which involved a transplant from serum cultures to ordinary solidified serum or a direct plant thereon from the pathologic material, and the subsequent regular wetting or washing of the planted surface of the culture medium with a mixture of serum and bouillon and *limewater,* the apparent streptococcus would develop into a bipolar bacillus, which subsequently (in four days time) sporulated. Further that transplants of this same bacillus could be cultivated as a small Gram-negative bacillus similar in all respects to the organisms of the group known to cause "distemper" in the various domestic animals.

By returning the Gram-negative bacillus to serum, and cultivating it therein for a generation or more, it could be made to return to its Gram-positive streptococcus-like form.

Thus it became apparent that growth in fluid media containing serum influences the organism to assume a short coccus-like form, of Gram-positive staining reaction, while growth upon the surface of solidified serum could be made to yield a small Gram-negative bacillus. If the limewater-containing wash be employed and the bacillus be developed to sporulation, then the bipolar bodies formed in the process show as Gram-positive bodies (just as do the compact coccus-like forms).

In fluid media, other than serum, the bacillus shows active motility.

A "Filter Passer." While the organism in the form of the fully developed bacillus is fully as large as many well known bacterial causes of disease—for instance as the diphtheria bacillus—when it is grown in serum or in milk it is very much smaller, and readily passes the Berkefeld filter, one of those commonly employed for such tests. When grown to full development, as a bipolar bacillus the polar bodies, which escape during "spore" formation, are even more minute than the serum-grown form, and consequently readily pass the same filter. Thus it is seen that filter-passing is by no means proof that the microbic cause of any given disease is ultra-microscopic, or even more minute (in ordinary form) than the bacteria with which we are most familiar.

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* Thus, Pasteur, Fullerton and Maccormac found a "diplococcus" in the fluid withdrawn from an acute case which caused motor paralysis when inoculated into the subdural space of rabbits, but which could not be grown (Lancet, Feb. 15, 1908). Schultz isolated a "coccus" occuring in "chains and fours," which he believed to be the cause of the disease. (Munich. med. Woch., 20 Sep. 1897). Giersvald (Norsk Mag. f. Laeg., 1905) also cultivated a micrococcus from the cerebro-spinal fluid of these cases. In 1909 a bacillus was cultivated from the blood of poliomyelitis cases, in the laboratory of the Pennsylvania State Department of Health (Laboratory Report, March, 1911).

† "Cultivation of the Organism of Poliomyelitis Upon Solid Media, and a Consideration of Its Behavior Under Varying Conditions," Greeley, "Medical Record" Jan. 13, 1917.

Grows Well at Summer Temperature and in Milk. In the article quoted, details were given of the ready growth of the poliomyelitis bacillus at summer temperatures. It grew very actively at 70° F. In market milk it multiplied readily, in form similar to that developing in serum. No change whatever in the physical appearance or odor of the milk resulted, after 24 hours growth; and, even after 48 hours, only one of seven cultures, from different cases of poliomyelitis, caused clotting of the milk.

Pasteurization Does Not Kill. Duplicate cultures of organisms from eight sources were grown in milk, at 98° and 70° F., respectively; and at the end of 24 and of 48 hours, respectively, the tubes containing the growths were pasteurized in a water bath (at 142°-45° F., the official temperature) for one-half hour. Replants made from all tubes grew as readily and as prolifically as though the heating had not been done.

Animal Tests. Intravenous inoculations of cultures into rabbits and cats was folowed in a small proportion of the animals by muscular paralysis. All of the cats used developed distinct cases of distemper, prostration, anorexia, and eye and nose catarrh, with constant sneezing, lasting at least one week, often several. Death of the animals, following the inoculation, occurred more frequently with some cultures than with others, and, in general, the severity of the symptoms depended upon the size of the dose. Similar results were obtained, subsequently with dogs. The organisms of the original cultures were recovered from all animals autopsied.

Owing to its interest, and I believe its importance, I will quote the following from the article in the "Medical Record," referred to:

"In injecting a cat (intravenously) with a culture of the organism, and wishing to give a second syringe full of the material, I detached the needle, leaving it in the vein, and refilled the syringe, then returning it to its connection with the needle. Resistance was, however, met to the flow through the needle (owing probably to a blood clot) and when I added extra pressure to the piston some of the culture squirted out around the needle-syringe joint, a drop reaching one of my eyes. It was carefully washed out with a solution of a silver salt and I thought no more about it. About 72 hours later I felt a slight soreness of the throat and some signs of digestive disturbance, including a slight headache. Temperature was not taken, but if it was elevated at all, it must have been very slightly. I went ahead with my usual routine, never suspecting anything but one of the everyday indispositions with which everyone is occasionally troubled, although I afterwards realized that I had felt very unusually nervous, all day. After I got to bed I could not, as I, as a rule, invariably do, get to sleep at once, but had to sit up repeatedly, owing to an unexplainable feeling that I could not breathe. There was not the slightest

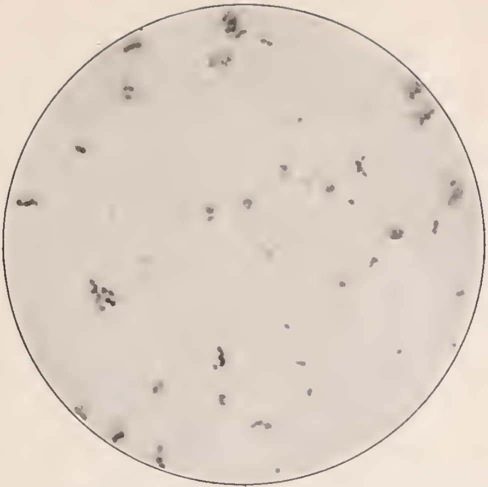

Fig. 1. Smear from culture made from cord of Case 1. Grown four days, anaerobically, in 25 per cent hydrocele fluid mixed with 75 per cent bouillon-lime-water (equal parts of each). Methylene blue stain. Magnification 1500; photomicrograph reduced one-half.

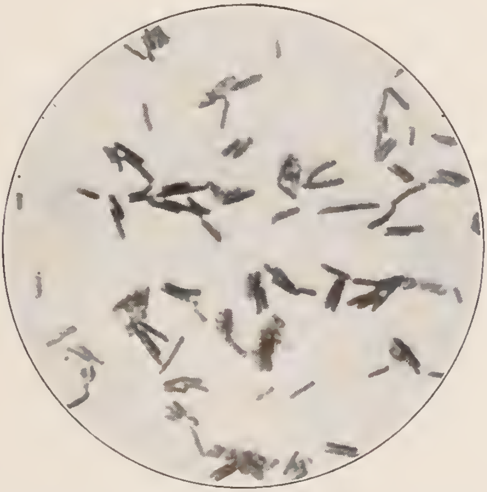

Fig. 2. Smear from culture made from brain of Case IV, 6th generation grown two days, aerobically, on Loefflers blood serum, washed with Bouillon-Lime water (lactose 4 per cent). Methylene-blue stain. Magnification, 1500; photograph reduced one-half.

Courtesy of the *Medical Record*

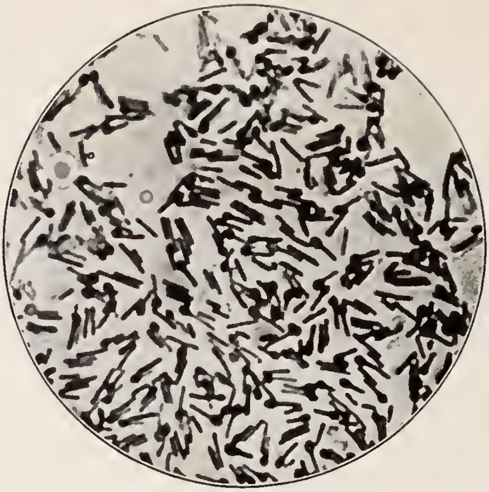

Fig. 3. Smear from second generation of culture shown in Fig. 2. Planted on Loeffler's blood serum which, at the end of two days—no growth having appeared—was submerged in bouillon limewater (dextrose 1 per cent) smear made one day later. Gram's stain. Magnification 1500; photograph reduced one-half.

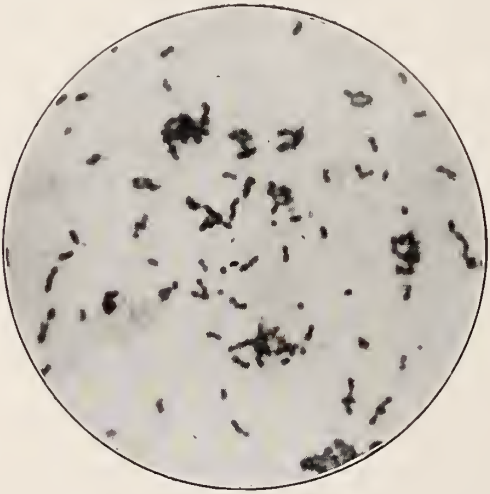

Fig. 4. Smear from culture (714.9) made Nov. 15, 1916 by Dr. Rosenow on blood agar. Methylene-blue stain. Magnification 1500; photograph reduced one-half.

Courtesy of the *Medical Record*

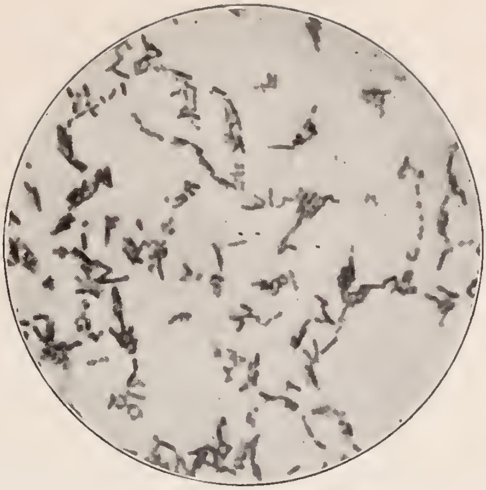

Fig. 5. Smear from replant (1st generation) from culture (of Fig. IV) supplied by Dr. Rosenow, made on Loeffler's blood serum washed with the hydrocele-bouillon-limewater-lactose mixture. Two days' growth. Methylene-blue stain. Magnification 1500; photograph reduced one-half.

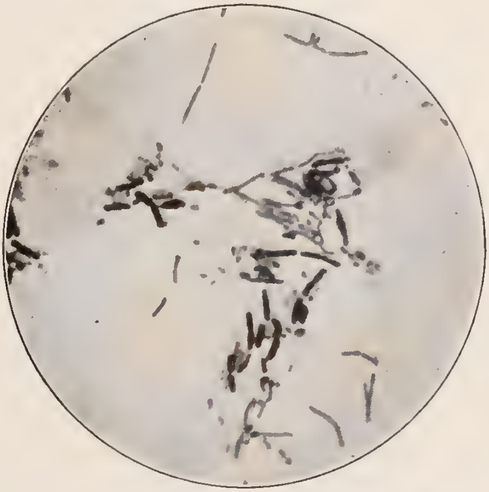

Fig. 6. Smear from replant (1st generation) of culture (of Fig. 4) supplied by Dr. Roesnow—after 4 days on Loeffler's blood serum washed daily with the hydrocele-bouillon-limewater-lactose mixture. Methylene-blue stain. Magnification 1500; photograph reduced one-half.

Courtesy of the *Medical Record*

interference with control of any respiratory act nor of any muscle. Through the night I slept very little, owing to a repetition of this uneasy sensation. The next day I felt fairly well, though slightly weak, which continued to be the case for several days.

"In the morning I began to suspect that the cause of the sensation might be a poliomyelitis-organism pharyngitis, and determined to investigate. The post-pharyngeal mucous glands appeared markedly swollen, and scrapings disclosed a great many spear-head shaped "streptococci-like" organisms, which subsequently gave developments, on cultivation, identical with those of the culture I had used on the cat."

Four platinum-wire loopfuls of mucus from my pharynx were mixed in one-and-a-half C. C. of saline solution and 1 C. C. injected intra-cerebrally into a rabbit, and one-half a C. C. intra-peritoneally into a young guinea pig. The rabbit developed paralytic symptoms within 24 hours, effecting principally, it seemed, the adducter muscles of his legs but as he fell about so I thought that his sense of equilibrium was affected. For a time this rabbit seemed to be recovering, but he eventually died, and autopsy showed extreme engorgement of brain and the entire cord, in smears from which an organism was plentiful that, upon cultivation, proved to be identical with that of the original culture.

The guinea pig was found dead on the 4th day, and autopsy showed congestion of the meningeal vessels of the cord. Those of the brain were extremely congested, and, in many places, had given rise to small hemorrhages. Throughout the substance of the brain the same engorgement of the blood vessels was apparent, and many extravasations of blood were found. Cultures, both from the brain and cord, gave the organism of the original culture.

The above guinea pig had been kept in a cage with another of the same age, an adult guinea pig and a young rabbit. Five days after the death of the young pig I found the companion guinea pigs dead, and the rabbit apparently sick. Autopsies of the two pigs showed extreme congestion of the vessels of the brains and cords, with small hemorrhagic extravasations here and there, upon and in the brain tissue.

The sick rabbit died the next day and showed a similar involvement of the nervous system, without other apparent lesion.

Cultures from the brains and cords of these three animals give the organism of the original culture.

The bodies of the two contact case guinea pigs were then fed to two young cats, one of which, four days later, developed the symptoms of distemper (catarrh and prostration) with the apparently identical organism in the discharge.

Two young cats that were fed, one on 2 C. C. of Culture I, and the other on 3 C. C. of Culture IV (both grown in milk for 48 hours), developed a copious diarrhoea which lasted seven and ten days, respectively.

The Organism from Naturally Acquired Distemper in Animals. Something should be said in regard to the organism causing distemper in animals.

It is stated, generally, in text books and the other literature, that all (or most) of the domestic animals suffer from infectious processes due to organisms which are at least allied to the bacillus causing the distemper of dogs and cats. After giving characteristics common to all of these organisms Besson (in the English Edition of his "Practical Bacteriology, Microbiology and Serum Therapy," p. 447) states: "As Nocard held, the organisms isolated from different animal species must be regarded as varieties of the same bacillus, and the conclusion arrived at is, in short, this: that there is one Pasteurella (name given to the group), which can pass from one animal species to another, and which by adaptation in one species can produce a disease peculiar to that species."

During the late summer I obtained cultures from three dogs suffering from canine distemper in order to compare the organism with that from poliomyelitis with the following results:

Smears from the nares of all three dogs showed great numbers of small-bipolar bacilli which varied considerably in size, and in their response to the Gram stain—in the same smear some appearing Gram-positive; some, Gram-negative; and some intermediate (not positively either positive or negative). Cultivation of these organisms by the methods detailed in connection with the poliomyelitis cultures, gave growths of an organism which corresponded in all particulars with the poliomyelitis bacilli. There were slight differences, to be sure, but only similar ones to those between poliomyelitis cultures of different source.

Serological Work. While a somewhat lengthy account of all the work that I have done in connection with poliomyelitis is to appear shortly, and includes details of serological tests made, something may be said here in regard to the general results obtained.

Animals were immunized with increasing doses of various cultures, from different sources, and, then, the resulting immune sera were tested for their agglutinating powers over the cultures used to produce them, and for their comparative effect in this respect upon other cultures. It was found that, while agglutinating the cultures used in immunizing the animal from which they were derived—in dilutions often as great as I in 600—the sera differed markedly in their effect upon the other cultures.

In order to test the agglutinating powers of the blood of convalescent poliomyelitis cases, I collected specimens of blood from 50 cases of our late epidemic (for most of which I am indebted to Dr. Walter Truslow, Chief Orthopedist of the Seaside Hospital) and tested each blood in five dilutions against six cultures of the organism. For comparative purposes, blood from children who never had had, so far as was known, poliomyelitis was used in a like series of tests. The main deductions to be made from the results were that children who never either had the disease or had been exposd to it, and also actual cases of the disease while in the acute stage, do not seem (as a rule) to possess specific agglutinating substances for the organism. Further, that the blood of various convalescents differs considerably in its power to affect particular cultures.

Agglutination tests of various blood specimens, against a culture of a distemper bacillus from a dog, gave results which varied very similarly to those made with the poliomyelitis cultures.

Acute Case of Poliomyelitis Treated with Specific Serum. While collecting some of the blood specimens used in the serological tests, the hospital physician asked whether I knew where he could obtain some serum from an immune person, as the family physician of a 16-year-old boy especially wished to have it tried, as he feared the patient otherwise had no chance of recovery. I told him of some cat anti-poliomyelitis serum that I had (prepared by repeated injections of cultures) and, after the patient's physician had been consulted, and had urged that it be tried, this was done.

The cat sera were first tested for any possible agglutinative and hemolytic action which they might have on the patient's corpuscles, and he was then given, intravenously, a mixture of sera A, B, and C (prepared by the use of three different cultures) about 35 C. C. in all.

The patient had been paraplegic and had suffered from bowel and bladder paralysis since his attack began, six days before. His temperature had been constantly around 103° F., and he was very restless, and complained of great pain along his spine. He was coughing considerably and a lung complication was believed imminent.

No effect was noticeable from the serum till about 24 hours after its administration, when the patient's bowels and bladder emptied themselves for the first time since his illness began, six days before, and the pain in his spine was completely relieved. Relief in these particulars continued, but the boy's lung complication grew worse, and he died, three days later, of pneumonia of the left lung. This case was one of the last of the epidemic, and, as yet, no other opportunities have offered for further trial of specific sera.

Certain Epidemiological Facts in Relation to the Bacteriology. The known, almost exclusive, prevalence of poliomyelitis in warm weather has been a subject of much speculation. Especially has the marked subsidence of epidemics at the onset of the cooler fall temperatures been noted. In this connection the fact, demonstrated in the foregoing, that the organism multiplies readily at 70 F. ("summer heat") is interesting. Especially important seems the fact that it grows readily at such temperatures in market milk, and that it is not injured by pasteurization of the latter.

As examples of how epidemics of poliomyelitis are effected by the outside temperature, it is interesting to glance at the following table, giving the mean temperature, and the number of cases of the disease reported, during each of the warm months of 1916, in New York City:

Month	Mean Temperature	Cases
May	59.3° F.	29
June	64.2°	756
July	73.8°	3863
August	73.6°	3306
September	66.0°	780
October	57.2°	193

The Commission that investigated the Washington (D. C.) outbreak, of 1910, reported that during the course of the epidemic the temperature varied between 69.7° and 77.6° F.

Within the last three months I have gone over all of the available literature on the epidemiology of poliomyelitis, covering some 60,000 cases, and have been struck by the evidence contained therein that few or no infants develop the malady while exclusively breast fed. Direct statements concerning the facts of feeding are few and far between, and to their evidence we have to add that of the rarity of the malady in babies under one year of age (who alone would be apt to be so fed) and its extreme prevalence (in about 90% of all cases) in children under ten. I have tabulated the statements found in the literature, referred to, as follows:

Epidemic	*Feeding*
New York (1907)	"121 cases exclusively breast fed among 283 under 2 years."
Massachusetts (1907)	"None of 7 cases under 1 year were exclusively breast fed."
Westphalia (1909)	"Considerable number of children at the breast were affected."
Massachusetts (1909)	"No case among exclusively breast fed."
Iowa (1910)	Two cases exclusively breast fed among 47 considered.
Cincinnati (1911)	Fifteen cases exclusively breast fed among 83 considered.
Buffalo (1912)	Twelve cases exclusively breast fed among 40 considered.

The indications of age incidence, as to the probability of exclusive breast feeding, are illustrated by the figures of the recent epidemic in New York City, as shown in the following table:

Total Cases	9,023
Under 1 year	11%
1-5 years	68%
5-10 years	16%
10-16 years	2%
Over 16 years	3%

Note that while 95% of all the cases were under 10 years of age, not over 11% were under 1 year.

The importance of the bacteriological relationship of poliomyelitis of man to distemper of the domestic animals is illustrated in the following table, which I have compiled from the literature:

ACUTE PARALYTIC DISEASE AMONG DOMESTIC ANIMALS COINCIDENT WITH EPIDEMIC POLIOMYELITIS.

Poliomyelitis Epidemic	*Annotation*	*Authority*
Vermont (1894)	"Horses, dogs and fowls affected with paralytic disease."	Caverley—J. A. M. A. 1896, Vol. XXVI, P. I.
Sweden (1905)	"Paralysis among dogs and other animals."	Wickmann. *
Dubois, Pa. (1907)	"Paralysis among pigs and chickens."	Free. *
Wisconsin (1907)	"Paralysis among colts, sheep, cats, ducks and many other animals."	Manning. *
Oceana Co., Michigan (1907)	"Paralytic disease of chickens."	Griffin—J. M. St. M. Soc. Feb. 08.
Rhenish Westphalia Germany (1909)	"Great mortality among chickens."	Romer — On Epidem. Kimderlah, Berlin, 1911.
Massachusetts (1909)	"Paralytic disease prevalent among animals."	Lovett—Month. Bul. Mass. St. B. of H. June, 1910.
Minnesota (1909)	"Colts, paralysis among."	Hill. *
California (1910)	"Paralysis among colts, dog, cats and chickens."	Snow. *
Washington, D. C. (1910)	"Paralytic disease appear-	Special Committee of

	ed among ducks and chickens just prior to the outbreak."	investigation.
Iowa (1910)	"Paralysis among cats, hogs and chickens."	Blerring. *
California (1910-11)	"Paralytic disease coincident among domestic animals."	Gundrum—Cal. St. J. of Med. May, 1913.
Sao Paulo, Brazil (1910-11)	"1000 horses and 4000 cattle died with 'symptoms of rabies."	Carina. *
Cincinnati, O. (1911)	"Paralytic disease coincident among domestic animals."	Frost—Hyg. Lab. Bul. No. 90.
Indiana (1911)	"18 paralyzed animals associated with 102 cases of poliomyelitis."	King. *
Ohio, Ky. (1911)	"Paralysis among chickens."	Batte. *
Alaska (1913)	"Outbreak was preceded by a great epidemic of distemper among the dogs."	Pierson—J. A. M. A. Feb. 28, 1914.

Conclusions.

Not to make useless repetition of what has been gone over in the foregoing, a rather dogmatic statement will be made in summation of the facts elucidated:

It has been demonstrated that the organism isolated from the nerve centers of cases of poliomyelitis (including the "streptococcus" described by Rosenow and others) is a pleomorphic bacillus of the distemper group, which varies in characteristics much as the various, supposedly different, members of the group do from one another. That this poliomyelitis bacillus could cause paralysis in cats, rabbits and guinea pigs, and that an accidental passage of a culture through man gave rise to abortive symptoms of the malady. That after this last named passage it could produce paralysis in a rabbit, and a contagious infection of guinea pigs with nerve center lesions; and, finally, that from the guinea pigs it (the same bacillus) could produce distemper in cats.

Further it is shown that the organism is saprophytic and grows well in milk at "summer heat"; and that it resists the pasteurization process, while contained therein. Also, that it forms spores, and is a "filter passer."

Finally, that it seems certain that, while contract cases of poliomylitis may occur, either by direct transmission of the germ from animal to man, or from man to man, the great mass of cases which comprise epidemics are most probably caused by milk borne contagion, and that it seems probable that we shall have to question our cows as possible "carriers" of the infection, although, it is, of course, evident that infection could get into milk from other animals, as the cat and dog, or even man.

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* Quoted by Frauenthal and Manning in their book on poliomyelitis.

CYSTITIS.*

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As part of a symposium on Pyuria.

From the Urological Department
of
The Brooklyn Hospital.

MY part in this symposium occupies somewhat of a middle ground, and with both ends of the situation so thoroughly well covered, if I stick closely to my text, I shall have a somewhat limited field. I wish to imply by this that cystitis *per se* is not a common condition, and that pyuria with a bladder source is usually only a part of some other pathological condition in the genito-urinary tract or elsewhere. In other words, cystitis is more frequently than not a symptom of some underlying disease. This applies particularly to chronic conditions. Acute cystitis occurs rather commonly and usually from one of two causes: first, from extreme constipation with fecal impaction in the lower bowel. Colon bacilli are carried by way of the lymphatics to the bladder with a resultant infection. These cases clear up very quickly with free catharsis, abundance of water, a dose of mixed vaccines, and a few doses of one of the various urinary antiseptics, and will give us very little trouble either from a diagnostic or therapeutic point of view. Second: Infection as a result of catheterization or some other form of instrumentation of the bladder. I doubt if any instrument is ever introduced into the bladder without carrying a few pathogenic germs with it. These, however, are usually taken care of, and expelled at the next act of urination, doing no harm. It is the frequent use of these measures, rough handling of instruments, or the employment of irritating chemicals, that do the damage. Nature will take care of a certain amount of infection in the bladder as she does elsewhere if given a fair chance, but, add to the infection trauma with abraded mucous membranes, a suitable culture ground for bacteria is produced, the odds become too great, and nature succumbs. I would urge gentleness as being equally important with cleanliness in the employment of instruments in the urethra or bladder. These cases, too, respond to simple measures; in fact their tendency is toward a spontaneous cure.

Pyogenic processes which persist in the bladder for any considerable time in spite of simple measures for their relief are due, I believe, to one of three groups of causes. First: the presence of some chronic irritant in the bladder cavity. Second: anything which obstructs the urinary stream and prevents the complete emptying of the bladder with each act of urination. Third: the presence of some focus of infection communicating directly or indirectly with the bladder and constantly adding to the ever present infection. If we accept this statement as a fact and apply it to our cases going down the line if necessary until by exclusion we have reached the proper cause, we will seldom find ourselves making an unmodified diagnosis

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* Read at the Brooklyn Pathological Society on March 8, 1917.

CAUSES OF PERSISTING CYSTITIS.

Chronic Irritant.	1. Calculus.		
	2. Foreign Bodies.	Introduced through urethra	:catheter tips :hair-pins :buttons :etc.
		In other ways	:bullets :bone fragments :etc.
	3. Neoplasms.	Particularly papilloma.	
Incomplete Emptying of Bladder.	1. Obstruction.	Displacements	:prolapse :cystocele
		Extravesical tumors	:fibroids :etc.
		Perivesical adhesions.	
		Urethra	:small meatus :stricture
		Bladder neck	:prostatic adenoma :prostatic carcinoma :contracture
	2. Disturbance of Innervation.	Tabes Other diseases of central nervous system.	
	3. Diverticula.	Congenital. Acquired.	
Pus Foci	1. Kidney.	Stone. Tuberculosis. Other infections.	
	2. Lower Genito-urinary Tract.	Urethra. Prostate and vesicles.	
	3. Pelvic Abscess.	Direct connection. Lymphatics.	
	4. Fistulae.	Uterus. Vagina. Rectum. Other parts of intestinal tract.	

1. Chart Showing Causes of Persisting Cystitis.

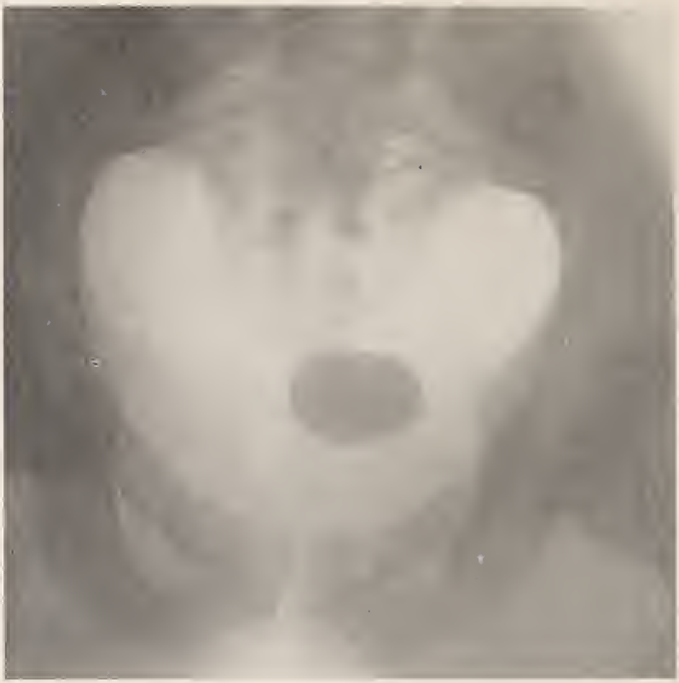

Figure 2.—Radiograph of Vesical Calculus

Figure 3.—Thorium Cystogram of Normal Bladder

of chronic cyptitis. Under the first heading may be mentioned vesical calculi; foreign bodies introduced through the urethra, such as broken catheter tips, hair-pins, buttons, and various other curiosities that have from time to time been observed in the bladder (here we have a constantly repeating trauma added to an ever present infection, and very naturally no amount of treatment short of removal of the invader will effect a cure;) vesical neoplasms (pyuria occuring in the later stage usually after some form of instrumentation: of course it is hematuria and not pyuria that occurs in the early stages of bladder tumors.)

Under the second heading, causes which prevent the complete emptying of the bladder, there are two sub-groups, obstructive and non-obstructive. In the first of these we have displacements such as cystocele in women, extra-vesical tumors causing pressure upon and distention of the bladder, and pelvic exudates with adhesions to the vesical wall. In the urinary tract proper we find as a cause of a persisting cystitis a congentially small meatus. One of the worst cases of cystitis I have ever seen occurred in a boy of six with a pin-point, hypospadiac meatus. He had 9 ounces of foul residual urine. A plastic operation was done for his hypospadias with some improvement. His bladder muscle, however, had become so atonic from prolonged overdistention that it was necessary to resort to prolonged suprapubic drainage for the purpose of permitting the bladder to regain its tone. Very tight stricture, post-gonorrheal or otherwise, is a common cause of a presisting cystitis. Perhaps the most frequent pathological condition occurring in this group are the various forms of obstruction at the bladder neck in the male such as prostatic adenoma and carcinoma, the small, sclerotic, athrophic prostate, and the various conditions found occasionally following prostatectomy and less frequently occurring independent of any prostatic involvement. In the second sub-group we have notably cases where there is disturbance of innervation such as the so-called tabetic bladder, which, however may accompany any disorder of the central nervous system, and congenital or acquired diverticula.

In the third group, foci of infection, we note renal infections, stone, tuberculosis, etc., less frequently infections of the urethra, prostate, or vesicals. Outside of the urinary tract we note fistulae with any other hollow viscus, pelvic abscess draining directly into the bladder, and other pelvic diseases where the infections may be carried by way of the lymphatics and not by direct communication.

I believe that most cases of chronic cystitis will come under one of these headings. Of course there are exceptions. For example: There are the cases which for one reason or another have required catheterization over a long period after the subsidence of the original trouble. Then too, there are the acute cases which have been overtreated and badly treated. Here not infrequently deep structural changes occur in the bladder wall. Not only is the mucosa involved, but the submucosa also, and occasionally the muscular coat itself is invaded. These are cases of true cystitis and they are extremely resistant to treatment. Fortunately they are the exceptions.

There are the still rarer types of solitary ulcer first described by Fenwick, probably due originally to some trophic disturbance. I have never seen one of these.

I still maintain that in the vast majority of cases patient investigation will demonstrate that cystitis is only a part of some other pathological condition.

Any of the pyogenic organisms may be the causative factor, and may be demonstrated in pure or mixed culture. Those most frequently found are the colon bacillus, staphylococcus, and streptococcus. It is well established that many bacteria, especially the bacilli, may be filtered from the blood stream by the kidneys, passing through the tubules and being eliminated by the natural channels without causing any lesion in the urinary tract. This has been noted with the tubercle bacillus and the typhoid bacillus. This happy event, however, does not always occur. The tubercle bacillus is occasionally held up in the kidney with resulting renal tuberculosis, and typhoid ulcers of the bladder not infrequently occur.

MODE OF INVASION. The invading organisms gain access to the bladder most frequently by way of the urinary channels, upward from the urethra, and downward by way of the ureters, less frequently by way of the lymphatics or direct communication with some pus focus, and still less frequently through the blood stream.

The symptoms of cystitis are too familiar to permit of any extended discussion—dysuria, nocturia, daily frequency, pain, and pus in the urine, which may be acid or alkaline.

The diagnosis of cystitis is usually readily made. In acute cases, rather a common error occurs in confounding the condition with acute gonorrheal posterior urethritis. This has been covered by Doctor Read. I would simply say that gonorrhea of the bladder rarely if ever occurs. In chronic cases there should be little difficulty in recognizing the presence of the cystitis from the symptoms, the urine, and most important of all, the cystoscopic picture of congestion, superficial ulceration, and clinging mucus. However, this is only the very beginning of our investigation. It still remains to determine the underlying cause of the trouble. In some cases, this too, is fairly easy. In other cases, it may require weeks of painstaking investigation and study, and call upon all the resources at the urologist's command, including perhaps, several cystoscopic examinations, uretal catheterization, cultures, animal inoculations, X-ray, etc. However, it is obvious that we should not be willing to stop at anything short of a complete diagnosis, and that treatment instituted before that diagnosis is made can be only palliative at best.

The treatment can be summed up entirely by saying—"while possible, remove the cause." With this done, in recent cases, the cystitis will usually take care of itself. In cases of longer standing, when the deeper structures of the bladder wall have been damaged, additional treatment must be directed at the bladder itself in the form of irrigations, instillations, and applications of the various remedies with which you are all familiar. This applies also to those cases that we find accompanying diseases of the central neurons, inoperable neoplasms, etc., where the cause cannot be removed. Here we must do all in our power to keep the bladder as clean as possible by means of irrigations, bladder drainage, and urinary antiseptics per orem. Time will not permit of an extended discussion of the various forms of treatment required.

This paper has been very general, no attempt has been made to go into details of any phase of it, and much has been left for the discussion which I trust will follow.

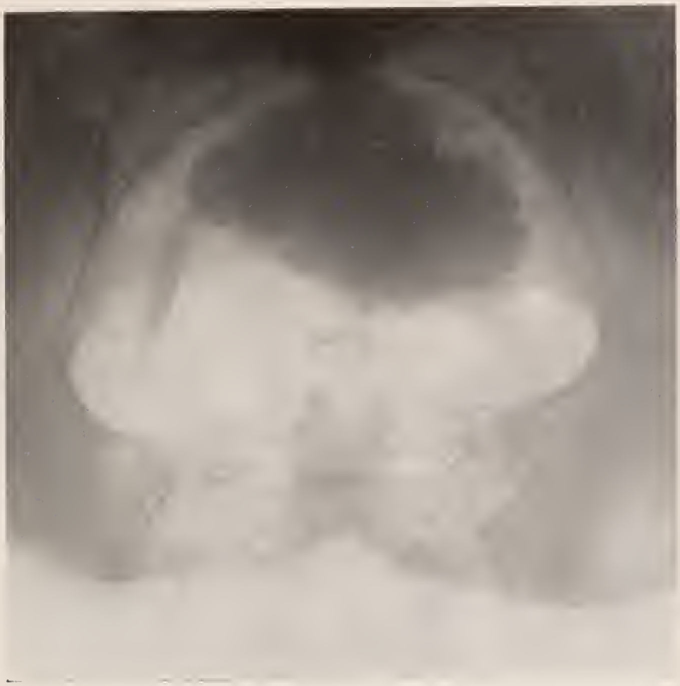

Figure 4.—Thorium Cystogram of Tabetic Trabeculated Bladder

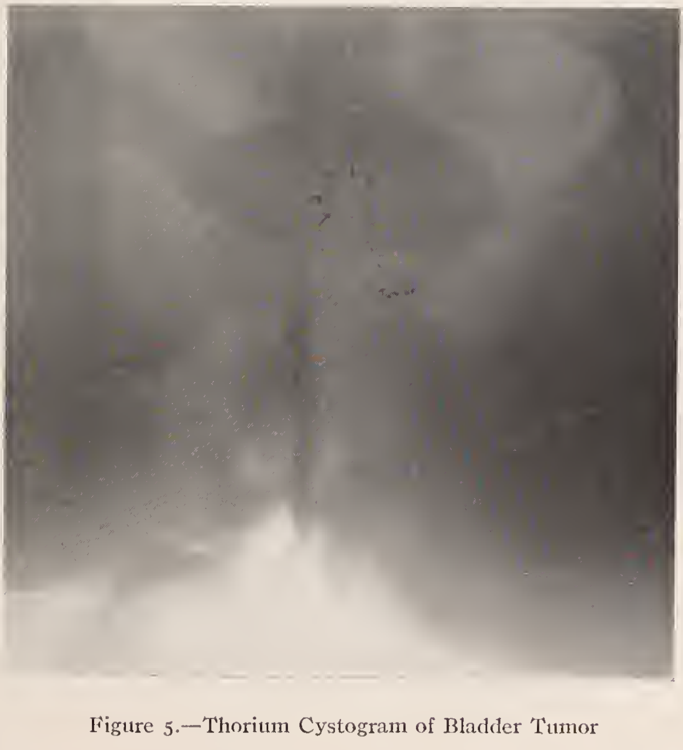

Figure 5.—Thorium Cystogram of Bladder Tumor

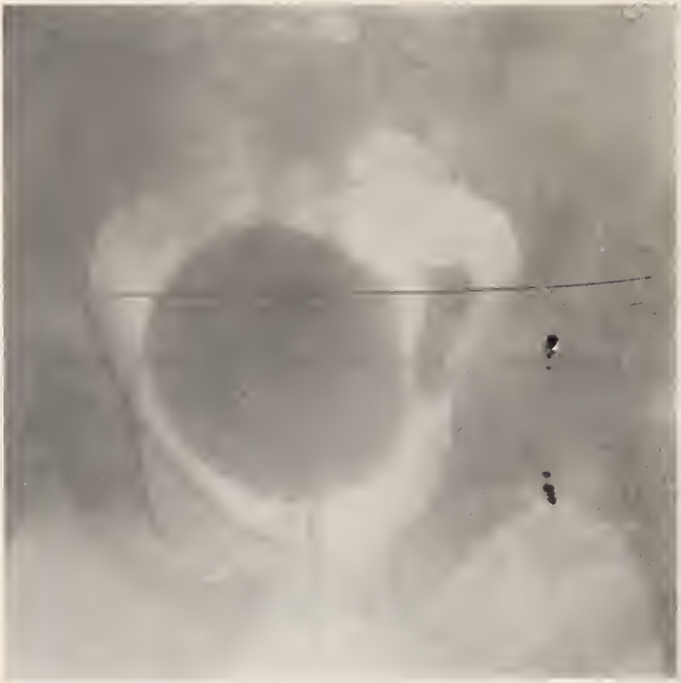

Figure 6.—Thorium Cystogram of Pelvic Abscess communication with Bladdes

SACRO-ILIAC INJURIES IN ACCIDENT CASES.*

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THE marked influence of suggestion over the course of medical, as well as lay thought, is proven by the history of medicine since the earliest periods of which we have any record, to the present time. This is shown today by the fact that the medical press will at certain times be filled with papers relating to some new condition or mode of treatment; and after a brief interval of time the subject will almost or totally disappear. The reason for this is evident, either such papers attract professional attention to conditions which before escaped recognition and cease to interest medical men as soon as their real importance is established: or only too often the medical profession at last realize, that through the power of suggestion, induced by those who desire to attain eminence by posing as pioneers in new professional fields, they have been mislead by facts and opinions which have been distorted to support some theory; and then the theory itself, like thousands of like ones which have preceded it, passes into the grave of oblivion.

This state of facts is also evident when we study the nature of the claims which are pleaded in our courts, as being the result of accident and injury. At certain periods one class of cases will be constantly pleaded; and it will be found that the nature of these claims will correspond to some subject, which at the time occupied the attention of the medical profession, and which like its predecessors, after a brief period disappears entirely or is seldom heard of. This is of course in part due to the fact that the results obtained in the trial of the first of these cases are often most satisfactory to the plaintiff's side of the case; and undoubtedly suggest to both the legal and medical men interested in that side, the character for the claims for damages in subsequent suits.

These primary successes are in no small measure due to the fact that at the time of the trial there was very little real knowledge of the subject obtainable to meet the claims made; but as soon as the real nature of the condition became established, such claims often rapidly diminish in importance or totally disappear.

Twenty years ago it would seem from the nature of the claims, that the nervous system was the part most often damaged in accidents; and the courts were filled with claims of railway spine, multiple sclerosis, traumatic neurosis, neurasthenia and hysteria. This period was followed by an electrical wave, due to the introduction of the trolley, and the most astounding results were claimed as the result of electric shocks. There was a bacterial era in which the lowering of vitality by trauma was claimed as the cause for the development of such diseases as pulmonary tuberculosis, typhoid fever and appendicitis. Thus claims for injuries to the female pelvic organs, cancers, hernia, idiocy and insanity have each had their day in court and are now seldom heard from.

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* Read before Medical Society of the County of Kings Nov. 21, 1916.

In 1909 Goldswaith of Boston published his first article on the subject under consideration; and for two or three years afterwards frequent papers on the subject appeared in the medical press; and about two years ago, this injury first appeared in court as a claim for damages: and in several cases such suits resulted in very large recoveries. During the past year this subject has assumed a position of such medico-legal importance that the real worth of such claims should be firmly established.

The sacrum somewhat resembles the key-stone of an arch, through which the weight of the body is transmitted to the two iliac bones on each side: and thence to the femurs in the standing position or to the tuber ischii in the sitting. Until recently it seemed well established that the sacro-iliac joint was one in which the auricular surfaces of the sacrum and ilium were united by cartilagineous plates and strong ligaments into a joint of great firmness; and was classed as an amphiarihrodial joint, or one which admits of no movement.

The joint in fact is a synchondrosis composed of two opposing cartilagineous plates which unite the bones with great firmness, one being applied to the auricular surface of the ilium and the other to the similar surface on the sacrum. In the young, in pregnant women and rarely in old people, a small cavity occurs between these two plates, which is occasionally lined with a synovial membrane, and contains a glairy fluid; but as a rule in the adult these two plates are almost in contact and are only separated by a thin layer of yellow pulpy substance. Both in front and behind the bones are united by heavy ligaments, the anterior consisting of numerous ligamentous bands; and the posterior of a strong ligament situated in the depression between the bones and forming the chief bond between them. This posterior ligament consists of numerous strong bands, three of which are of large size. The two upper passing from the first and second transverse tubercles of the sacrum to the inner and posterior part of the ilium, while the third passes obliquely downward from the third sacral tubercle to the posterior inferior iliac spine.

The opinion, then, that the sacro-iliac joint was a very strong one, and required great violence to injure it seemed unquestioned until very recent times; and is the usual one to be found even in our latest text-books. This is well shown in Johnson's Surgical Diagnosis which says "that in a few cases separation has occured both at the symphysis pubis and sacro-iliac joint" and that "separation of the sacro-iliac joint is a very rare injury." The causes which this writer recognizes for this injury are all those of great violence; "as falls from a height upon one foot, violent pressure from before backward over the ilium, and occasionally falls in which the individual lands on one side of the pelvis." In these cases also an upward displacement has been observed.

That it requires great force to fracture the pelvic bones is as yet unquestioned; and therefore the views quoted are supported by Von Bergman when he states in his Practice of Surgery, that "the same forces that produce fracture of the pelvis may also separate the individual bones." "When the articulations are separated and the ends of the bones displaced, the condition is spoken of as a dislocation; but, when the joint is simply opened with rupture of the ligaments, the condition is termed a separation."

Both Johnson and Von Bergman further state; that when dislocation occurs, the entire hip is prominent anteriorly from displacement of the ilum; and that when the sacrum is displaced the case resembles a Malgaigne's fracture, except that there is no bony crepitus.

It appears then that the pelvis is composed of heavy bones; that these are firmly united into the form of an arch of which the ilii form the sides and the sacrum the keystone; that they are united by cartilagineous plates and heavy inelastic ligaments; that only a very slight amount of movement can occur in this joint; and that it requires extreme violence to separate or dislocate these bones. During the last decade this view has been questioned. It is claimed that the sacro-iliac joint has the structure of a true joint; that it permits a small amount of motion; that as one of the joint surfaces is vertical and the other two oblique their relation is naturally unstable; that the stability of the joint depends more on the condition of the surrounding ligaments and supporting muscles than with other joints; that the axis of motion in this joint is through the line of the second sacral vertebra; and that the sacral cord and sacral nerves are in close relationship with the sacro-iliac joint. Much of the foundation for claims for injury to the sacro-iliac joint rests upon the interpretation of the plates obtained by X-ray photography; but experience has shown that these readings can not be admitted without question. This is well stated by Langnecker who says that "anatomic variations from the normal structure of the bones of this region are very common. Very often these anomalies do not become evident until excessive or repeated joint strain brings them under observation": and by Fassett who says "so that we may form some sort of an estimate as to how many people are going about with large transverse processes and other anatomic variations without any symptoms at all. Of course it is only the ones with symptoms that come to the physician and it seems to me that we have a very one sided view of the subject thus far."

These statements are supported by the results obtained by the writer from inspection of one hundred plates taken of the pelvis for other conditions than sacro-iliac disease and in which no symptom of such conditions are claimed: and which show the same and often worse anomalies, in 53%; than do the plates which are offered as evidence for the existence of sacro-iliac injury.

Abnormal sacro-iliac conditions are divided by Langnecker into three groups. First the traumatic, with or without anatomic variations; second static; and third toxic.

The first, or traumatic, are subdivided by him into the acute, in which the trauma is recent and primary: and the chronic, in which the trauma is recurrent and of long duration.

In the acute type the lesion is unilateral, with or without bone displacement; and occurs from direct strain or indirectly from muscular action. The injury so produced is either a slipping of the bony surfaces or a rupture of the ligaments.

The causes recognized for the acute type are all ones of great violence, such as lifting of heavy objects while in a stooping position, sudden twists of the body, sitting down forcibly, throwing the weight of the body suddenly on one leg before the supporting muscles of the joint have had time to contract, sudden strains, as in cranking an automobile; and the various strains which may arise, in falls, jumping, swimming or diving. Parturition is also a cause and especially because, as already appears, the joint is normally relaxed during pregnancy; and as a less marked condition also occurs at the time of menstruation, the condition being more frequent in the female at that time.

The symptoms in the acute traumatic type delevop suddenly and at the time of the injury. There may be a sense of something giving way, immediately followed by severe pain referred to one and rarely to both scro-iliac joints. This pain may be so intense that the patient is unable to move; and in every case it is increased by all movement. There is tenderness over, and sometimes deformity of the affected joint. The lumbar curve is obliterated and movement of the back is limited or prevented by muscular spasm. The hands are used in rising from the chair, and the patient stands or walks in a stooping position, or with the body bent away from the most affected joint. The alteration of the relation of the parts from straining, laceration and swelling causes pressure on the adjacent nerves and pains may occur in any part of the sciatic area. Flexion of the thigh with the leg extended, extreme adduction of the thigh, and rotation cause an increase of the pain in the injured sacro-iliac joint, which radiates down the back of the thigh; but flexion of the thigh with the leg flexed causes no pain.

The chronic traumatic type is the result of repeated strains causing relaxation with occasional displacement and adhesions. It is usually unilateral but rarely may be bilateral; and may result from repeated movements which cause a broad transverse process of the fifth lumbar vertebra to press on the sacrum with sufficient force to tilt it backward. Such conditions are usually found in such occupations as wood-chopping and automobile repairing.

The symptoms are the same as in the acute type but develop slowly and are intensified by each new strain. At first the pain is intermittent; but after repeated trauma it may become continuous, with exacerbations which cause the patient to present the same clinical picture as in the acute type.

The static group is entirely due to faulty position. The muscles and ligaments supporting the joint are relaxed from constant strain which tilts the sacrum forward and therefore is usually bilateral. The most common causes are general debility, anatomical variations which result in lateral spinal curvature, clothing which compresses the trunk or gives inadequate support, lipomatosis, increasing weight, foot or leg positions which give unequal support to the pelvis as flat foot or shortened limb, pregnancy with relaxed pelvic joints, and occupations which require fixed positions, as miners and automobile drivers.

The symptoms develop very gradually. The attitude is relaxed and there is a sense of weakness in standing and walking. Backache is constant and there is tenderness over the joint which prevents lying on the back; the lumbar spine is in a state of lordosis and the lumbar muscles in a state of spasm.

The toxic group consists of those cases in which the joints are inflamed as the direct result of the presence of the organisms of tuberculosis, syphilis, gonorrhoea, typhoid fever, from infectious diseases of the naso-pharynx and gastro-intestinal tracts, from pelvic disease and gynecological procedures, and from preverted metabolism. The onset is gradual and varies with the cause. The joints are swollen and tender, and the tissues thickened. The pain is increased by motion of the trunk, and especially by sitting, standing or walking.

In chronic cases a dull pain is felt over the sacral area, with sharp paroxysms referred to the back, buttocks, hips and posterior aspects of the thigh. Posture does not relieve the pain; and the back is rigid and bent forward and to one side. The lumbar curve is abolished and the dorsal spine is prominent.

It appears then that the claim, that the sacro-iliac joint has the structure of a true joint can be allowed, for the junction of any two bones is a joint; but if by this claim is meant that this joint has any such structure as the shoulder joint, then it appears that there is absolutely no evidence to support such a contention. That this joint permits a very small amount of motion has never been questioned; but that the firm union of the two bones forming this joint is naturally unstable can be denied by the examination of any adult skeleton, which will clearly show that it does not depend on the powerful ligaments which form an additional safe-guard, for its support and in no way on any muscular structure.

That the sacral plexus has a close relation to the front of the joint is unquestioned but what is meant by the sacral cord can not be understood, unless it be the coccyxageal filiments of the corda equina, as the cord itself terminates at the lower border of the first lumbar vertebra.

The evidence furnished by the X-ray plates to support the contention of injury, is worthless as has already been shown.

It would appear, then, that dealing with the question of sacro-iliac joint injury in our courts should be a very simple one; but when we come to study the cases which are pleaded in our courts and the character of the medical evidence by which they are supported, the situation certainly demands the attention of the medical profession for its own protection.

The cases which have come under my personal observation can be divided into four classes. First those in which the disease did not exist; second those in which it did exist; third, in which its existence was not recognized, and fourth, in which it was due to other causes. The following are examples of the first class:

Case 1. C. H. Female. Aged 30. School teacher. She was asleep in a berth at the time of a railroad wreck but was not awakened until afterwards when a porter called her and told her to dress. She left the car but returned to it; and came to New York with a strange man whom she met on the train. He took her to a hospital and there an interne who made no examination, told her that she might develop a concussion of the spine. On arrival home she claims to have found bruises on her knees, ankles and sacrum. Thirty-six hours after the accident she developed pain about the waist and in the back of the right thigh, loss of power of walking, and six days after a delirium which lasted twenty-four hours. When seen all her movements were normal, the eyes were directed upward and in ward, and her voice was high pitched. She was very emotional and her mind was fixed on her condition. This was increased by her aunt who insisted that there was a clot on the brain. Examination was negative beyond a hysterical hyperesthesia of the lumbar spine. She was later seen by Drs. Bailey and Hunt, when she complained of general weakness, pain in the back and legs, headache, nervousness, irritability, loss of memory, and power of concentration. She answered quickly about her condition but hesitated on all other subjects. She cried gently and later had an irritable outbreak. Her gait was slow and she used a cane. It was almost impossible for her to move her left arm when it was examined although she previously used it with vigor in handling her cane. There was psychic weakness of the legs and arms which increased during the examination. The abdominal and plantar reflexes were diminished, there was loss of sensation below the navel, tenderness on pressure over the dorsal and lumbar spine; but otherwise the examination was negative. The X-ray plate which was exhibited at the trial showed a slight separation of both sacro-iliac joints, but nothing more than a condition which is commonly seen in cases in which no such claim is made.

There can be no question, then, that this was not a case of sacro-iliac injury, but of hysteria due to suggestion, not from the accident itself but from those around her. She is now in a sanitarium and will probably remain there until some honest doctor or faith healer causes her to believe the truth, that there is nothing the matter with her.

Case 2. E. P. Female. Aged 28. Single. School teacher. She fell in the aisle of a car in consequence of a sudden jerk in starting. When seen by the division surgeon twelve days after, she stated that she did not know that she was hurt until six days after the accident. All that was found at that time was slight redness and tenderness over the sacrum. An X-ray plate was taken ten months later and showed a slight lateral curvature of the lumbar spine with separation without deformity of the left sacro-iliac joint. She then developed pain and weakness in both lower limbs. Examination showed a decided tendency to exaggeration with a desire to inject the words ecchymosis and synchondrosis into the conversation, a fine tremor of the hands and eye-lids, sensitiveness to light pressure while deep pressure was unnoticed and without change in pulse rate, over the whole length of the spine to the coccyx. There was nothing abnormal about the sacro-iliac joints, there was no pain or rigidity of the back; and the tests described were negative. There was a slight lateral spinal curvature. This is also evidently a case of pure hysteria, not due to the accident but to suggestion by those around her long after the accident; and in which there is absolutely no evidence of any injury to the sacro-iliac joint. It is possible that she did have some trouble with the joint as a result of her spinal curvature but not of sufficient development to be disclosed by the recognized tests. The X-ray picture in this case was only of value to suggest the idea of injury to the patient.

Of the *second class,* in which the disease existed and was recognized, the following are good examples:

Case 3. M. S. Female. Aged 40. Married. Three children. House-wife. May 28, 1914, she was seated in a trolley car, in which a short circuit with bright flames occured, causing burns on her legs and feet. In escaping from the car she jumped and landed on one foot, spraining that ankle. She at once developed pain in the back, and fright. Since then she has suffered from pain in the back of the pelvis, which radiates down the back of the right thigh and which is increased by lifting the right foot or straightening the back after bending forward. Examination one month later showed that she kept the body bent forward and to one side, and did not raise the feet in walking. The objective examination was negative beyond pain referred to the right sacro-iliac joint on pressure on the shoulders or sides of the pelvis; and upon extreme adduction of the right thigh or extension of the right leg with the thigh flexed. This case made a complete recovery in six months. This case answers all the required conditions to constitute an acute traumatic condition of this joint and was not obscured by hysterical or other complications.

Case 4. M. H. Female. 46. Ireland. Married. House wife. While sitting on a stool at a counter, the top came off, and she fell to the floor. In doing so the iron upright struck her in the region of the coccyx and she was stunned by her head striking the floor. Examination by her physician showed a laceration above the coccyx, a painful and abnormally movable coccyx, pain in the right sacro-iliac articulation and loss of rectal control. Examination one year later showed that she rested on one buttock in sitting and restrained the movements of the right leg and thigh in walking, that there was an anesthesia over the inner side of the buttocks and perineum, that the sphincter ani was relaxed; that there was a scar running from the coccyx along the right side of the anus; and that there was pain in the right sacro-iliac joint on extreme adduction of the right thigh; or extension of the right leg with the thigh flexed. Otherwise the examination was negative. This case also shows a classical picture of acute traumatic disease of the sacro-iliac joint with injury to the perineal nerve as a complication.

Class three, in which the condition existed but was not recognized by the attending physician.

Case 5. M. M. Female. 39. U. S. Married. House-wife. She was seated in a car which was in collision and she was thrown forward between the seats. She was rendered unconscious and bruised on both hips. Since then has suffered from pain in the back of the neck, vertigo, palpitation, and pain referred to the right hip. Her physician considered the case as one of traumatic neurosis. Examination showed that she was unable to stand without assistance though her movements in bed were normal; that she was very emotional, that there was a hysterical left hemiplegia, hysterical anesthesia of the left hand and hysterical tenderness over the entire spine; that there was a marked contraction of the visual fields; and true tenderness over the right sacro-iliac joint, with pain referred to that joint on making the tests already referred to. That this women did have a hysteria is unquestioned but she also had an acute traumatic sacro-iliac joint condition, which passed unrecognized, and when it received proper treatment, the patient's condition rapidly improved.

Class four, in which the condition existed but was not due to the cause claimed

Case 6. M. B. F. Female. Aged 37. U. S. Single. House-wife. Her physician states that she suffered from infantile spinal paralysis in infancy; that she was standing in a car which was in collision and was thrown to the floor (both the collision and fall were denied by the defendant); that she was bruised over the sacrum and coccyx and has since been a nervous wreck. Examination showed extreme paralytic atrophy below the right knee, with talipes equinovarus of the right foot and three inches shortening of the right leg; hysterical tenderness over the lumbar spine, sacrum and ilium; and true pain over both sacro-iliac joints as the result of pressure and on the application of the tests already mentioned. This, then, was clearly a case, not of the acute traumatic type, but of the static type due to the unequal base of support, complicated with hysteria.

It remains unquestioned, then, to establish a case of sacro-iliac disease as of the acute traumatic type or one directly due to an injury that it must appear that there was no evidence of any trouble with the joint before the occurrence of the claimed accident; that none of the causes cited as producing the chronic traumatic, static or toxic forms were existing before the occurrence; and that is especially true of cases in which bilateral injury is claimed as violence rarely affects both joints.

It must also appear that the injury was one of great violence and one which throws great strain on this joint, not being simply being caught between the closing side doors of a trolley car, but one of such a character as falling heavily on one foot, or on the side of the pelvis or on the buttocks, or pnes which cause sudden and violent twists of the body or severe anterior-posterior pressure on the pelvis as in crushing accidents, or due to lifting weight in a bent position. It is also unquestioned that the symptoms of the acute traumatic form occur at once and are severe; as pain referred to the injured joint, which is increased by its movement and the tests already mentioned, by tenderness of and sometimes deformity of the joint, by obliteration of the lumbar curve and immobility of the back due to lumbar spasm, by the patient's walking and standing with the body bent forward and away from the affected joint, and by pain referred to the sciatic nerves on the side of the injury.

Aggravation of pre-existing sacro-iliac disease, as of the static, toxic, or chronic traumatic types, has not as yet to my knowledge been pleaded in our courts and would explain some of the cases in which neither the character of the accident nor the immediate symptoms indicated a basis of any such claim; and yet in the eyes of the law such a state of facts is just as grave as if the disease had never existed. This is probably due to the fact that it would be much more difficult to show the degree of aggravation than to claim the whole condition as being the result of some injury.

EDITORIAL

PURE DRINKING WATER.

THE Merchants Association Company of New York evidences its devotion to high civic duties in again calling public attention to the dangers of pollution of the water supply. Several years ago the Legislature enacted bills authorizing the erection of a State Hospital for the Insane at Mohansic and the Boys Training School at Yorktown. Both these sites are on the Croton Watershed on the shores of Mohansic Lake which discharges directly into the Croton reservoir; when completed these two institutions will house from 5,000 to 8,000 persons. Contemplated sewage disposal is provided for in a filtration plant that has been declared adequate by competent engineers; the State has already expended large sums on the school, which is nearly completed, and has recently appropriated an additional $300,000 for the hospital. Governor Whitman has taken the matter into his own hands and has ordered work stopped on both institutions: *but* the enabling acts still stand and the menace to the Croton Watershed continues until these laws are removed from the books.

It is interesting to note, in the report of Mr. Ralph Hering, the following statements in regard to possible sewage contamination from these proposed establishments; he says:

"IF the proposed plans, which are elaborated as perfectly as any I have seen, are faithfully carried out, which can readily be done;

"IF the works are built in a first-class manner, which would presumably be done; and

"IF their subsequent operation is *equal to that given to most water-supply filtration plants* in our country at this day, a pathogenic danger to the Croton water supply from the Mohansic sewage works is impossible."

Note the "ifs." When one considers that the perfect working of these sewage disposal systems is entirely a matter of continued watchfulness on the part of imperfect human beings, one realizes at once that the menace is there. So long as everything went well there was no trouble from the stored explosives on Black Tom Island: *but* someone was careless and they blew up. The report of the Merchants Association on this subject points to the report of the State Commission of Health which made an examination in 1910 of a number of public institutions in which sewage disposal plants were depended on with such results as these:

WESTERN HOUSE OF REFUGE FOR WOMEN, AT ALBION:—

The report says it worked satisfactorily for a few years, while new, but of late years has become clogged, and "that a large part of the time the sewage has been allowed to flow around the beds by a by-pass without any purification whatsoever." It further says that a nuisance undoubtedly exists.

NEW YORK STATE SCHOOL FOR THE BLIND, AT BATAVIA:—

The operation of the sewage disposal plant is shown to be unsatisfactory, its condition neglected, and "the sewage now runs constantly through one set of chambers without receiving any chemical treatment."

NEW YORK STATE REFORMATORY FOR WOMEN, AT BEDFORD:—

The sewage disposal plant at this institution is shown to have been built recently, but the result of its operation is shown to be a "nuisance, much complained of both by those in the institution and by others passing along the road nearby."

NEW YORK STATE TRAINING SCHOOL FOR GIRLS, AT HUDSON:—

The sewage disposal plant was shown to be in bad condition, "the overflow of sewage over the slope of the hill created a considerable nuisance."

NEW YORK STATE AGRICULTURAL AND INDUSTRIAL SCHOOL, AT INDUSTRY:—

The method of sewage disposal is condemned and a change recommended.

THOMAS INDIAN SCHOOL, AT IROQUOIS:—

It is stated that "in all probability the present method of discharge does not constitute a public nuisance, though possibly it may injure riparian owners in the immediate vicinity. Since, however, any pollution of Cattaraugus Creek waters is carried out into Lake Erie only twenty-five miles west of the Buffalo City intake, a distance of which any infection present might readily be carried under unfavorable conditions of surface currents induced by winds, it is evident that protection should be provided against this danger through sewage purification."

STATE CUSTODIAL ASYLUM FOR FEEBLE-MINDED WOMEN, AT NEWARK, N. Y.:—

The sewage disposal plant is shown to have become broken, and "the effluent has been discharged into the empty prism, producing a great odor and arousing strong complaints on the part of individuals living in the vicinity."

NEW YORK STATE WOMEN'S RELIEF CORPS HOME, AT OXFORD:—

The sewage is shown to be discharged into State waters, in violation of the law, and "has been the subject of complaints."

It is perfectly obvious that in placing these institutions where the sewage disposal is by any chance, however remote, likely to contaminate the drinking water of a vast community, the menace to the public health thus constituted is so great as to demand prompt and radical action. It is a grim satire on the underlying motives which permitted the choice of these building sites to compare the ruthless energy with which small farmers have been ousted from the Croton Watershed; surely if one farmer, whose house and stable waste filters through one-half of a mile of sandy loam into some tributary of Croton Lake, is a dangerous neighbor, what can one say of 8,000 insane and defective persons whose entire waste empties directly into Mohansic Lake? With the undependable barrier of a sewage disposal plant as the only defense against unrecognized pollution by typhoid, parasitic dysentaries and other water born infections, the Merchants Association is right in its endeavor to permanently remove this danger. Every citizen should at once enlist himself in the fight and protest vigourously to his State Representative at Albany. Suitable legislation is now pending to bring this about. The proposed bills are Senate Bills #19-20-21 and Assembly Bills #55-56-57 which provide for the abandonment and sale of the buildings and sites of both the Training School for Boys and the Mohansic State Hospital, and further forbid the future location on the Croton Watershed of institutions for the treatment of mental or other diseases, or for correctional or charitable purposes. Much may be done by letters favoring this legislation sent to the Hon. Henry M. Sage, Chairman, Senate Finance Committee, Albany; Hon. H. E. Machold, Chairman, Assembly Ways and Means Committee, Albany; and Hon. George H. Whitney, Chairman, Senate Committee on Public Health, Albany. In this time of general stress when the importance of intelligent cooperation by citizens in dealing with questions of public welfare is so evident, the need for intelligent cooperation becomes more and more apparent. We are beginning to realize, as a people, the careless and wasteful ways into which we have fallen. We have deputed so many individual duties to professional office seekers that it is small matter for wonder that the people have not always been worthily represented. If out of the confusion of present unpreparedness there may develop an orderly and efficient management of the people's business, the gain for future generations will be well worth while. In the present instance it will be future economy to do away with the menace to our water supply at any cost.

H. G.W.

BOOK REVIEWS.

THE Librarian of the Medical Society of the County of Kings has published a list of one hundred volumes that could be added at once to the shelves of the Library if the necessary reviews could be supplied for publication here and in the N. Y. State Medical Journal. The Library depends very largely for its new books on the volumes which are received by these two journals for review. Publishers courteously supply copies of their new publications in order that they may be able to judge from the published reviews the sort of reception that their books are likely to receive. It is the custom of most medical journals to present the reviewer with the book as some tangible return for his trouble in writing a review, but where, as in the present case, the volumes are desposited with the Library, it is difficult to excite interest among busy physicians, who may be willing, but lacking in time.

There is a positive benefit in preparing book reviews, for the reviewer quickly learns to read in a critical spirit, which in time becomes a valuable asset in his general reading. The present opportunity should appeal especially to those newer members of the profession whose time is available for this purpose.

H. G.W.

MORE BIRTH CONTROL.

THE February number of the Critic and Guide is given up entirely to the discussion of this propaganda, which seems so near the heart of Dr. William J. Robinson, who wields a trenchant pen with a militant spirit. The doctor's ire has evidenly been aroused by the proceedings of the New York Co. Medical Society, and he does not hesitate to flay the speakers who disagree with his point of view. Neither does he cloak his scorn by any *oratio obliqua.* No, he names them right out in meeting.

There is little to be gained by personal abuse, and ridicule, while it raises a laugh, not infrequently reacts unpleasantly. If the Editor of the Critic and Guide throws aside the rapier of argument for the bludgeon of ridicule he is apt to be answered with the same weapons: if one wants to find out how many shillalahs there are at Donnybrook Fair, just pull your own from under your belt.

The Doctor also provides a series of moving pictures of the abortion evil and its tragedies that are especially in need of the shillalah. The picture of a clandestine prostitute dying in a general hospital as a result of septic infection from a carelessly performed abortion, and all because a cruel and hard hearted law denied her the knowledge of birth control, hardly appeals to one as a valid argument for the indiscriminate education of the female public along these lines. If it proves anything it shows that the ones who would most welcome this knowledge are the very ones who are least worthy of it. And what of that young mother who lies dead with her heartbroken husband sobbing beside her—her doctor husband who performed an abortion to please his wife lest her children come too fast? Is this an argument for the spread of knowledge of birth control? It would seem rather as a scathing arraignment of the ignorance, selfishness and incompetence of the doctor. No, the more one thinks on birth control the more he is impressed with the wisdom of the Hippocratic Oath which says, "I promise and swear that I will not give a pessary to a woman for purposes of abortion." Hippocrates lived many years ago, away back in the dim past when people were supposed to be much more ignorant than they are today, but he recognized the dangers that come from ill considered meddling with the laws of nature and we should be more than ever impressed with the wisdom of the ancients. It may be because we fail to draw our lessons from the past that so many of us are so ready to tamper with the laws of nature, which are the laws of God.

H. G. W.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY

Minutes of Annual Meeting held February 1, 1917.

The President, John E. Jennings, M.D., in the Chair.

Program.

A. Address in Memory of Paul Monroe Pilcher, M.D.
Walter A. Sherwood, M.D.
B. Case Reports:
(1) Angioneurotic Edema with Visceral Crises.
(2) Intracranial Injury.
Warren L. Duffield, M.D.

C. Paper: "The Surgical Treatment and Results in Cancer of the Rectum and Pelvic Colon."
Charles H. Mayo, M.D.
Rochester, Minnesota.
(by invitation)
Discussion by Drs. H. Beekman Delatour, Jerome M. Lynch, Wm. B. Brinsmade and Charles H. Peck.

REPORT OF CASES OF INTRACRANIAL INJURY.

Warren L. Duffield, M.D.

THE term "intracranial injury" is used as descriptive of the following cases to emphasize the fact that we should look upon them as intracranial injuries and not as fractures.

It is the injury to the brain either through laceration, pressure from hemorrhage or edema which causes death or prolonged invalidism and not simply the broken skull—vault or base.

The following brief and incomplete histories are cited as types of three classes of cases: the first, a depressed fracture of the vault; the second, a fracture of the base immediately operated, and the third, a fracture of the base operated after an interval of one week.

It is probable that practically all cases of depressed fracture of the vault have received prompt operative relief and equally probable that many fractures of the base have not. The practice has seemed to be to plug their nares and auditory canals with gauze and, as Sharpe says, "If the patient recovers, remarkable—he had a fracture of the skull. If he dies—well he had a fracture of the skull.

A boy ten years old was brought to the hospital in a comatose condition with a history of having been struck by a motorcycle He was bleeding from his nose, mouth and right ear, his pulse was 120. He was in a coma and there were no convulsive movements. There was a depressed fracture about the size of a half dollar in the squamous portion of the right temporal bone. This was immediately elevated and portions removed. Upon opening the dura the brain was apparently under moderate tension and the vessels of the cortex were much injected. There was no evidence of brain laceration. The following day it was noted that he was quiet all day and on the third day the following note was made, "mental condition has cleared up. In fine condition." He was later discharged apparently perfectly well.

This case has been previously reported (The Long Island Medical Journal, July, 1916.) This patient was a male sixty years old, brought in with a history of having been struck by an automobile. When admitted he was irrational and actively delirious ,requiring restraint. When seen about half an hour later he was in deep coma with a pulse of 90. He had several scalp wounds but in none was there any involement of the bone.

Without anesthesia a right subtemporal decompression was performed. There was no bulging of the dura but upon opening it a large quantity of cerebro-spinal fluid escaped, at first clear but later deeply blood stained. After the pressure had been removed, and while still on the operating table, he began to talk in an incoherent manner and began moving his extremities.

For about three weeks he was at times mildly irrational at night, though perfectly rational during the day, and it was noticed that during these periods there would be a bulging at the site of decompression.

This case was seen by Dr. Browning who stated that the mental condition was probably due to an old alcoholism and that it would clear up, which it did and the patient was discharged in six weeks in excellent condition.

The third patient was a boy ten years old who was admitted with the following history. Seven days before he had been run over by an automobile. During the week following he had been up and about but had been mentally depressed. Early in the morning of the day of admission severe convulsions of the entire right side began and were practically continuous. When brought to the hospital he was in a convulsion which continued until placed under anesthesia for operation. His pulse was 140. No fracture could be found but there were deep ecchymoses around both eyes.

A subtemporal decompression was immediately performed. There was no apparent increased intracranial tension but the pia was considerably injected.

Five hours after operation he conversed rationally, he had no further convulsions and returned to his home seven days later.

When examined five and one half months later he was apparently normal in every respect, had been in perfect health since leaving the hospital and the decompression caused him no inconvenience.

An effort was made to trace the other cases but was unsuccessful.

The first case, a depressed fracture of the vault, belongs to a class which has usually received prompt recognition and treatment; but the remaining two cases of probable fracture of the base belong to a class which has suffered through watchful waiting, until the onset of medullary compression and edema have rendered all efforts futile.

A subtemporal decompression is a simple, relatively safe procedure which can be quickly done and as it drains the area of most frequent basal fracture, the middle cranial fossa, offers a means of relief for a class of injuries which in the past have not received the attention they deserve.

Paper: "The Surgical Treatment and Results in Cancer of the Rectum and Pelvic Colon."

Charles H. Mayo, M.D.

Rochester-Minn.

(See P. 129.)

Dr. H. Beeckman Delatour, in opening the discussion, said:

"I am sure we are all greatly indebted to Dr. Mayo for coming here and presenting this subject to us in such a clear way. It is a condition which needs to be brought before the profession generally because there are so many of these cases that go unobserved, and, as Dr. Mayo pointed out, they are capable of cure. It is not an operation simply to relieve, but it is an operation to cure in a large and growing proportion of cases.

"Dr. Mayo has covered the field so thoroughly and everything that he has said is so much along the lines—so absolutely along the lines of my own feeling that I believe there is nothing left for me to discuss, Mr. Chairman. We have to remember one thing which I would like to bring to the attention of the profession, particularly the medical men who see these cases—that is the terrible conditions which they observe when these cases are allowed to go on unoperated. Personally, I have seen cases that appeared to me to be inoperable and have advised against operation, and they have lived a year or a year and a half. In one case two years afterwards I was called again to see the same patient in a most deplorable condition suffering the torments of the damned, and had been so suffering for six or eight months. It was the sight of these cases that stimulated me to undertake the operation more frequently, and in cases that were apparently inoperable, I have learned that my judgment was entirely at fault and that many of them could be not only relieved but cured. Today I operate cases with a feeling of confidence that they will stand the operation if it is properly performed, doing it in two stages where the patient's condition demands it, sometimes doing it in one stage where it seems advisable, and with a feeling that I am going to stand a very high chance of producing a permanent cure. The lesson which Dr. Mayo has given to the profession here tonight is one that we should all carry away with us and be very happy indeed to do so."

Dr. Jerome M. Lynch, of Manhattan, in discussion, said:

"I am very much indebted to the Chairman and the other members of the Society for the courtesy of inviting me here this evening to listen to this paper by Dr. Mayo.

"Dr. Mayo's review has been so able and so comprehensive, that I will only take up a few minutes of your time.

"I am very glad that Dr. Mayo has pointed out tonight, as he has on many other occasions, the necessity of most carefully studying these cases before they are turned down as inoperable. We see a very large percentage of cancer cases; one, in particular, I recall had a colostomy for six months; we afterwards operated on her, and she is alive today, six or seven years after the operation. So I feel that a large percentage of the cases that are turned down because of the inherited belief that cancer of the rectum is inoperable, are, in fact operable.

"Instead of speaking of the operation, the technique of which has been so perfected by Dr. Mayo, I would like to state a few facts in connection with the cases we have observed. I think we have seen some 450 cases of cancer of the rectum. Five per cent, or about one in every 20, were under 30 years of age, and seven and a half were under 35 years of age. Now, in most textbooks on surgery the impression is conveyed that if the patient is under a certain age, the possibility of cancer is thrown out. Another belief is that a patient afflicted with cancer must have lost weight and look cachectic, and he must have great pain. I believe that in not more than five per cent of the cases which we have seen, have the patients complained of pain. A great many patients have gained weight, and I remember several that gained from 5 to 10 pounds shortly before we saw them, yet these patients had inoperable cancer of the rectum.

"I know that many cases of cancer go along in comfort and have very few symptoms, but if ordinary digital examinations were made when the patient complains merely of hemorrhoids or some rectal lesion, we are confident that a great many of these patients would have been saved.

"I am very thankful for the opportunity of hearing Dr. Mayo's paper."

Dr. William B. Brinsmade, in discussion, said:

"I desire to emphasize the important message Dr. Mayo has brought to us tonight which is that an artificial anus is not such a very bad thing. There are plenty of people going around with them today in comfort. There is one gentleman sitting on the Bench in this city today with an artificial anus and I know of two ladies in society who are going about with them and a seamstress who is attending to her work. All of these people have an artificial anus after an operation for the removal of a carcinoma of the rectum and they are all leading reasonably comfortable lives. The old idea that an artificial anus is something to be abhorred and a nuisance to society and to one's friends and associates should be disregarded today if the operation is properly carried out."

Dr. Charles H. Peck, of Manhattan, in discussion, said:

"I have not much to add to Dr. Mayo's resumé of the subject. I think that in this class of cases we need such a resumé in order that we may get our ideas crystallized as to the proper selection of procedure.

"It is desirable to make an effort to preserve the perineal anus, if it can be done safely, and in the past I have tried to do this a number of times. In some low growths it is feasible, but the number of cases in which this can be done is limited. The best result I have had—a 9 year cure—followed the low operation. Such cases are the exception, and, as Dr. Mayo and Dr. Brinsmade have said, the abdominal anus is usually the best method of completing the operation, for in doing this one is not tempted to limit the amount of tissue excised during the operation. Although Dr. Mayo has brought out many valuable points in technique, one which strikes me as being of great importance is that of preserving the sigmoid loop or trap.

"I have had several cases with an artificial anus of a number of years' standing which, as Dr. Brinsmade pointed out, go about and attend to their usual occupation without being a nuisance to themselves, their friends or the community. None of them thought that they could do it, and when the proposition is first made they usually refuse it and think that death is preferable to an abdominal anus, but if the subject is properly presented and they are given the chance to think it over and decide deliberately, most of these patients can be made to accept this plan. I have recently seen a man with an early carcinoma of the rectum, a round ulcer hardly larger than a silver quarter, on the rectal wall. He absolutely refused to have any operative procedure done because he had been asked to accept the possibility or the probability of a permanent abdominal anus. He is now undergoing radium treatment, and I believe that in a few months' time the growth will probably be so far advanced that no operation will be of benefit to him. I remember once seeing an old gentleman with a hemorrhage from the bowel. He had an attack of grip with violent coughing and had had a rectal hemorrhage. When I saw him I found on examination of the rectum the smallest carcinoma that I have ever seen; it was hardly as large as a dime, within a few inches of the anus. I urged operation and told him that I thought probably the low anus could be preserved. He discharged me immediately and called in another physician who made light of it. I saw him two years later, when he was brought into my hospital with complete intestinal construction of two weeks' standing in a moribund condition, and died within twenty-four hours. Some cases are frightened away from any operation by the suggestion of an abdominal anus. The method of approach and the method of dealing with these patients is very important and deserves a good deal of thought, so that they can be made to see the situation in the true light—made to appreciate what it means for them. Furthermore, it is important to decide upon the method of procedure which will give them the best possible chance of an ultimate cure.

"The principle of the two-stage operation is one which is of great value in these cases. There is one method of the two-stage operation which I have used a number of times which Dr. Mayo did not mention, but which I have seen done at their clinic, and that is the method of doing nothing but an exploration and a colostomy at the primary stage and then a complete excision from below or behind, leaving a little segment of bowel distal to the colostomy wound that is not excised at the secondary operation. That, I believe, is a procedure which has its place. It is not as desirable as the two-stage operation that terminates in complete excision of the bowel. At the same time, in debilitated patients with operable growths, it is at times a useful method. I saw it done in England in 1910 and for a time it was done in the Mayo clinic. I do not know whether it has been abandoned there entirely or not. The little segment of bowel which is left distal to the colostomy does not, as a rule, give much trouble. In suitable cases, excision done by this method will give as good results as the combined method.

"There are so many points to be considered in the selection of the method to be pursued that one hardly knows where to begin or where to stop.

"I again wish to express to Dr. Mayo my very great appreciation of his splendid resumé and to say that I have enjoyed the discussion of the subject more than I can express.'

Dr. Charles H. Mayo, in closing the discussion, said:

"The discussion has greatly supplemented my remarks on the subject. I would like to say a word as to the preliminary operation or the two-stage operation to which Dr. Peck has referred. We still make use of the two-stage procedure. I neglected to speak of it but it is used for cases in which there is some obstruction and when the condition is not just right for the complete or radical operation. We do not use this procedure as often as formerly. However, every resource possible is needed in dealing with these cases and if the cancer can be approached in regions in which the lymphatic tissue is unimportant it can then be safely operated on and cured, more often than has been generally supposed. This is also true, for example, in cancer of the fundus of the uterus and of cancer of the top of the head and scalp. The further you get away from the lymphatic regions the safer you are.

"After all, when it comes to the test it can be said that in more than 60 per cent of persons with cancer of the colon coming to autopsy the disease was still local."

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

MARCH, 1917

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, MARCH 20TH, 1917.

The President, Dr. Albert M. Judd, in the chair. There were about 300 present. The meeting was called to order at 8:45 p. m., and the minutes of the previous meeting were read and approved.

Report of Council.

The Council reported favorably upon the following applications for membership:

Charles Bromberg, 187 Hooper St.; L. I. C. H., 1905; proposed by R. S. Fowler; seconded by Membership Committee, Jan. '17.
Vito Caronna, 31 Jefferson St.; Univ. Naples, 1907; proposed by P. Virdone; seconded by R. S. Fowler, Feb. '17.
Leo Faske, 1515 Eastern Parkway; L. L. C. H., 1912; proposed by C. Goldman; seconded by L. Fisher, Mar. '15.
Paul C. Fleri, 264 Union St.; Albany Med. Coll., 1913; proposed by G. De Yoanna; seconded by A. De Yoanna, Feb. '17.
Henry J. Goubeaud, 518 Carlton Ave.; L. I. C. H., 1890; proposed by A. M. Judd; seconded by Membership Committee, Feb. '17.
Mattio Siragusa, 208 Melrose St.; Univ. Palermo, 1905; proposed by P. Virdone; seconded by R. S. Fowler, Feb. '17.

Election of Members.

The following, duly proposed and accepted by the Council, were declared elected to active membership:

Wm. H. Bayles, 92 Gates Ave.; P. & S., N. Y., 1906.
Edward M. Child, 904 St. John's Pl.; N. Y. Univ., 1877; proposed by J. W. Ingalls; seconded by F. C. Eastman, Dec. '16.
John C. Hamilton, 6120 20th Ave.; Vanderbilt Univ., 1903; proposed by S. J. Post; seconded by Membership Committee, Oct. '15
Joseph Katz, 287 Hinsdale St.; L. I. C. H., 1914; proposed by J. B. Kanter; seconded by M. J. Dattelbaum, Dec. '16.
Richard M. Mills, 193 Fenimore St.; Queens, 1907.
Edward S. Norton, 284 Hawthorne St.; L. I. C. H., 1908.

Applications for Membership.

Applications for membership were received from the following:

Wm. J. Clemens, 447 77th St.; Fordham, 1913; proposed by J. C. Williams; seconded by C. G. O'Connor, Mar. '17.
Hyman S. Emil, 152 Bay 16th St.; Med.-Chir., 1916; proposed by W. L. Wolfson; seconded by L. S. Schwartz, Mar. '17.
Joseph T. Loughlin, 864 Nostrand Ave.; Albany, 1914; proposed by J. W. Fleming; seconded by W. H. Donnelly, Mar. '17.
Margaret McCarthy, 340 Stuyvesant Ave.; N. Y. M. Coll. & Hosp. for Women; proposed by J. C. Hancock; seconded by Membership Committee, Mar. '17.

For Reinstatement.

Stanislaw J. Alkier, 301 Broadway; Univ. Vt., 1890, Mar. '17.

For Corresponding Membership.

Henry A. Geib, Woodhaven, N. Y.; Univ. & Bell., 1914; proposed by Membership Committee, Mar. '17.

Scientific Session.

Paper: "Gall Blader Disease a Progressive Inflammation: Its Treatment — Cholecystectomy." (With lantern slide demonstration). 15 minutes.

By Russell S. Fowler, M.D.

Paper: "Our Milk Commission and the American Association." 10 minutes.

By Walter D. Ludlum, M.D.

Dr. M. S. Elliott, U. S. N., and Dr. Arthur N. Tasker U. S. Army, spoke, favoring recruiting of medical men in the Navy and Army.

Paper: "Bronchial Asthma in Children: Its Treatment." 20 minutes. Proteid sensitization skin reactions will be shown.

By Fritz B. Talbot, M.D.,
of Boston, Mass.

Dr. Brinsmade offered the following resolution.

WHEREAS: A situation has arisen which may oblige our country to resort to the force of arms to defend the rights of American citizens and to uphold the cause of humanity, and

WHEREAS: In preparation for such contingency the services of the medical men of this country will be urgently required by the Government; and

WHEREAS: Every loyal practitioner who pledges himself to the state, loses both his practice during his term of service and also the positions of responsibility that he has acquired.

Therefore be it resolved, That the President of this Society with the advice of the Council shall appoint a committee of ten members representing various specialties whose duty it shall be to investigate the methods adopted in Canada, Great Britain, and France, under similar circumstances and to report a working scheme which will give reasonable assurance to the members of this Society that their practices will be cared for during their absence, and returned to them intact on release from the military duty assumed in order to maintain the freedom and honor of the United States.

Seconded by Drs. Wm. F. Campbell, Henry A. Fairbairn, Thurstown H. Dexter and J. Richard Kevin. Resolutions were adopted.

Dr. Talbot's paper was dicussed by Drs. Walter D. Ludlum, Elias H. Bartley, Alexander C. Howe and George F. Little.

It was moved, seconded and carried that a vote of thanks be extended to Dr. Talbot.

The following resolution was presented by Dr. S. R. Blatteis, Chairman of the Committee on Public Health.

WHEREAS: Existing laws of the State of New York, authorize the location upon the Croton Watershed, of a State Hospital for the Insane, and a State Training School for Boys, and

WHEREAS: Such institutions in such a location would constitute a grave menace to the city's water supply and the public health, therefore

Be it resolved, That the Committee on Public Health of the Medical Society of the County of Kings protest against the use of any part of the Croton Watershed for any such purpose, and be it further

Resolved, That a copy of these resolutions be sent to the Medical Society of the County of Kings, the Legislative Committe of the Medical Society of the county of Kings, the Merchants Association of New York, the

Hon. Henry M. Sage,
Chairman, Senate Finance Committee, Albany.
Hon. H. E. Machold,
Chairman, Assembly Ways and Means Committee, Albany.
Hon. George H. Whitney,
Chairman, Senate Committee on Public Health, Albany.

It was moved by Dr. Bartley, seconded and carried, that the clause "Whereas existing laws of the State of New York authorize the location upon the Croton Watershed of a State Hospital for the Insane and a State Training School for Boys," be amended to read. "Whereas: Existing laws of the State of New York authorize the location upon the Croton Watershed, of a State Hospital for the Insane, and a State Training School for Boys" and any other sources of pollution.

This amended resolution was moved, seconded and carried.

Dr. Campbell presented the following resolution which was moved, seconded and carried.

WHEREAS: A movement has been started to increase the annual per capita tax on members of the Medical Society of the State of New York,

Resolved, That the Medical Society of the County of Kings condemns as unnecessary and impolitic any increase in the annual per capita assessment, and that it direct its officers and delegates to oppose any attempt to secure such increase.

The following resolution presented by Dr. Masterson, was moved, seconded and carried.

Resolutions offered by Committee on Medical Economics at meeting of Medical Society of the County of Kings, March 20, 1917.

WHEREAS: Under the present Workmen's Compensation Law, the injured employee is unable to choose his own physician without paying for the medical service himself, and

WHEREAS: The injured workman after being treated by his physician for a period of time varying from a few days to a few weeks, is often requested to go to physician designated by employer or insurance carrier or assume the medical bill, thus being done a grave injustice, and

WHEREAS: This is in violation of the spirit of Workmen's Compensation Law, therefore be it

Resolved, That this Society approve bill introduced in the Assembly by Mr. Evans amending Sec. 13, Workmen's Compensation Law, by permitting an injured employer to choose his own physician, and giving such physician the right to recover in his own name without making the Commission a party, such sum as the Commission may award him against the employer or his insurance carrier, and be it further

Resolved, That a copy of these resolutions be sent to our local Representative and to Mr. Evans and the Chairman of the Committee on Legislation of the Medical Society of the State of New York.

Dr. Kevin presented the following resolution.

Resolved, That a special committee of 15 be appointed by the chair to be known as the Charter Revision Committee, whose sole function is to bring about legislation at Albany, by a campaign among civic bodies of Brooklyn and the people generally, to the end that we obtain for all time absolute Borough Autonomy in health matters for Brooklyn.

The above resolution was moved, seconded and carried.

Meeting adjourned at 11:10 p. m.

C. E. Scofield,
Secretary.

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"WHY IS THE ART OF OBSTETRICS SO POORLY PRACTISED?*

J. Whitridge Williams, M.D.,

Baltimore, Md.

IT is a great pleasure for me to come before you this evening at the invitation of your President. I never think of Brooklyn without recalling several of your very considerable men in my own line of work. I refer particularly to Skene, Byrne and Jewett, to all of whom I am indebted for many things.

I am sorry to say the title of my remarks tonight is not spontaneous, but was suggested to me by your President. I did not know I was going to address the annual meeting of the Society or else I should have put my remarks in writing, so if you will pardon the informal way in which this subject will be presented I shall be happy.

The mere fact that your President has suggested this title to me carries with it the implication that certain people believe that the art of obstetrics is poorly practised. That is open to some discussion, at least, and I know from conversation with many perfectly respectable and enterprising doctors that they all do not hold that view; so I take it if I am to talk to you on this subject it will be obligatory upon me to prove that the art of obstetrics is, as a general rule, poorly practised, and if I succeed, to my own satisfaction, in doing that I shall then consider some of the factors which are responsible for it and possibly lay down certain suggestions which may improve matters in the future.

Now, is obstetrics poorly practised? In the last few weeks interesting statistical proof of this fact has been put in my hands. As you know, the United States Government during the last few years has organized a Children's Bureau which is a part of the Department of Labor. The Bureau is in charge of Miss Julia Lathrop, who is an extremely competent woman and I believe has the unique distinction of being the highest paid female in the employ of the Government. She has associated with her a corps of workers, who, in investigating certain problems connected with children, found they could not proceed with the work unless they studied the mothers, so practically the first thing they have undertaken is a study of obstetrical conditions in this country, and one of her assistants, Dr.

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*An informal address delivered before the Medical Society of the County of Kings, Dec. 19, 1916.

Grace Meigs, has just finished an article entitled "Maternal Mortality," which will be distributed free by the Government, and the statements I shall now make mention of are taken from it. She states that in the year 1913, 15,376 deaths occurred in this country from childbirth. Of these 7,000 were due to puerperal infection. The remaining 8,000 were due to the various accidents of childbirth. Of course, that is a very considerable death rate, and her statistics show that when the causes of death in women during the child-bearing period—that is, between the ages of 15 and 45, are analyzed, childbirth next to tuberculosis, was the most common cause of death. She also figured that in 1913 one woman died to every 154 babies born. Accordingly, if we average four babies to a family, this means, roughly speaking, that one woman out of every 40 in this country between the age of 15 and 45—whether married or single—will eventually die in the act of childbirth. This sounds pretty bad, but does it really mean that obstetrics is poorly practised, or does it mean that this represents the inevitable death rate associated with what should be a physiological process?

Dr. Meigs' statistics apparently prove the former. She states that in the last 23 years (1890 to 1913) in the registration area in this country, which now includes about 65 per cent of the entire population, there has been no appreciable change in the death rate from childbirth; indeed the death rate in the last year of that period (1913) was greater than the 23 years previously. To be specific, her figures show that the death rate per 100,000 of population was 15.3 in 1890 and 15.8 in 1913. Indeed, her statistics are even a little worse than that. They show a progressive increase in mortality in recent years; that is, from 1901 to 1905, inclusive, the total death rate per 100,000 was 14.2, of which 6.3 were due to puerperal infection, whereas in the five years from 1906 to 1910, inclusive, the death rate was 15.3 and 6.8, respectively. In other words, in the first and the last half of the last decennium there was an actual increase in the puerperal death rate. At the same time, during the 23 years in which there was no decrease in the death rate from childbirth, a very striking change had taken place in most other diseases. Thus, for example, she shows that in these 23 years there had been a decrease of 170 per cent in the death rate from tuberculosis; 285 in typhoid fever; 185 in infant diarrhea; 520 per cent in diphtheria. This, of course, means that while the diseases under consideration have been combated most satisfactorily, the death rate from childbirth has remained unchanged, and, as said before, this either means that these figures adduced represent the irreducible minimum death rate or they mean that obstetrics is very poorly practised. Now, which of these is true? I assume that the latter is the case, and my reason for thinking so is that in the better class of lying-in hospitals, more particularly those with large material which can be utilized for statistical purposes, we find the death rate reduced to a minimum, whereas outside of the hospitals it is actually greater than is indicated by her figures.

Another very interesting point which Dr. Meigs makes in her article is that the mortality is higher in large cities than in small ones or in rural communities, and that the death rate in the large cities has actually increased in the last few years; thus, for example, in 1900 the death rate in rural communities and small towns was 11.7 per 100,000 and in the large cities 14.9, whereas 13 years later (1913) it was 13.8 and 17.2 respectively. In other words, there has been an increase in the death rate of 3.2 per 100,000 in the large cities and a smaller one in rural communities. Now, how can we account for this? One would imagine that the death rate would be higher in country districts where there are fewer doctors, the people live further apart, and also because the doctor in country districts is supposed in many instances to be inferior to his urban colleague; but, in spite of all that, the death rate for rural communities and small towns has been lower than in the large cities, and when we consider that this includes not only the cases coming under the care of the general practitioner and the midwife, but also the cases conducted more or less ideally in the large hospitals, one would expect a great difference in favor of the cities, and the reason that this doesn't occur and the reason why the death rate is higher in the large cities, to my mind, can only be due to the fact that in the large cities the practitioner trusts to an amount of knowledge and skill which he does not possess and this works to the detriment of his patients with the result that the mortality is greater than in the rural communities. The only exception in Dr. Meigs' statistics to this general rule is New York City, which, in the last 23 years, has shown a slight but progressive decrease in puerperal mortality, and this she is inclined to attribute to the large lying-in hospitals and to the extension of out-patient obstetrical charities. So much for Dr. Meigs.

I approached the subject of obstetrical education five years ago in an address which I made to the American Society for the Prevention of Infantile Mortality, entitled "Medical Education and the Midwife Problem in the United States." This did not represent merely my personal impression, but was based upon the study of a questionnaire which I sent to the professors of obstetrics throughout the United States. To the questionnaire I got answers from 43 professors representing some of the very best schools, some of the good schools and some of the poor ones and the data were obtained by averaging up the answer to the forty or fifty questions which I asked these men, beginning with their education, then going over their methods of teaching, the lying-in hospitals, the methods of teaching of their school, etc., etc., and I would direct particular attention to two of the questions, namely Nos. 21 and 22, which were are follows:

Question 21, "Do you believe that more women die from infection in the practice of midwives or in that of general practitioners?" and to this 8 replied that they could not answer, 15 replied the physicians, 13 the midwives and 5 equal. In other words, these 43 professors who were kind enough to answer my inquiries were almost equally divided as to whether worse results were obtained by midwives, who are notoriously ignorant, or by doctors, who are supposed to have some expert knowledge on this subject.

The answers to the second question were even more striking: "Do as many women die as the result of ignorance, or of ill-judged and improperly-performed operations in the hands of doctors as from puerperal infection in the hands of midwives?" Eight could not answer this question. Six answered against the midwives, 26 against the doctor and 2 that the results were equally bad in the two classes. In other words, in this inquiry these men, who had no particular interest in the matter I had in hand, answered that the doctors kill far more patients throughout the country by ill-judged operative procedures than do the midwives by puerperal infection. The result rather surprised me because I didn't expect the answers to come in quite that way. My own experience is very much the same and from my 28 years' experience in the practice of medicine and 25 years' experience in teaching I have come to the conclusion that in Baltimore at least the ordinary doctor does more harm to his patients, as a rule, than the midwives, although we surely know that the midwife does a great deal of harm. You know in the Bible there were two midwives, Shiphrah and Puah. They were the two midwives whom Pharaoh instructed to go out and kill the little Hebrews as they were born, but they didn't. It says further on in the Bible that God was good to the midwives. I think he has been extremely good to them ever since and a great deal better than they deserve. We all admit that they do a great deal of harm, but the harm which they do is exclusively in the way of puerperal infection. (At this point the doctor said that while the physicians not only get as much infection as the midwives, they do the most harm by interfering with conditions which should be left alone and that they frequently convert an apparently simple condition into a complicated one. Continuing, he said):

Now, that is rather a railing accusation, but I have had considerable experience and I have had a great many patients brought into my service after being handled by doctors, and my general conclusion is—I am talking now of Baltimore—that the ordinary run of doctors haven't a clear conception of what asepsis means.

Another very striking thing I have observed is that the ordinary doctor hasn't a very clear conception between the first and second stage of labor. He doesn't know that the child doesn't begin to descend until the cervix is fully dilated. A considerable proportion of my consultation work consists in being called to see a woman in the first stage of labor with the request to deliver her when all that is necessary is to give nature a chance. In a large number of these cases I am called in after the doctor has interfered and he has interfered on an erroneous diagnosis and done something which he shouldn't do, but the two things which I find are most abused are:

First, manual dilatation of the cervix to hasten labor for one reason or another, and

Second, the application of forceps in mistaken diagnoses, and a common mistake is for the doctor to make a diagnosis of L. O. A., where in reality he has to do with an R. O. P., put on the forceps incorrectly and then attempt delivery by brute force, with the result that many children are born dead and not a few of them with fractured skulls.

While speaking of dilatation of the cervix, I cannot help telling you a story which one of my associates told me the other day. I asked him about his experience in consultation work in connection with dilatation and he replied, "Did I ever tell you about the experience which I had last summer in one of the suburbs?" I replied that he hadn't, whereupon he said, "I was asked by a doctor to help him in a difficult case. I went out to the house and the doctor told me that he was in an awful predicament, as he had attempted to dilate the cervix, but was unable to do so, and he said, 'See what you can do.' I examined the woman, found a frank breech presentation with the cervix fully dilated and the breech just inside the vulva and I readily extracted it," but, when he came to examine the child afterwards the anus looked like the metaphorical star with rays extending in every direction.

I don't want to go on with this catalogue of horrors, but really one has some remarkable experiences. One day in a street car I met a very estimable gentleman and he said, "Dr. Williams, I am going to a very interesting case." I said to him, "Is that so, what kind of a case is it?" "I am going," he said, "to do the sixth consecutive craniotomy on the same patient." "What are you going to do it for?" I asked. "Why, she has a contracted pelvis." When I replied that that was not a satisfactory indication, he said, "I think it is a very good reason." "Well," I said, "I consider you a blankety blank murderer," and he got up and sat on the other side of the car and hasn't spoken to me since.

Furthermore, when you think of the way that the woman in the lower walks of life is handled and what she gets in the way of obstetrical treatment when she employs a private physician you can't blame her for going to an obstetrical dispensary. Of course, the doctor may feel that because of the smallness of the fee which he gets from such women in childbirth, he does more than he is paid for, and he may be right, but when that woman hears of the prenatal care and the excellent service at the time of labor and during the puerperium which one of her friends received from a well-conducted obstetrical dispensary, can you blame her for going to the dispensary when she is pregnant again and for feeling she has had a pretty raw deal in the meantime.

I have just picked out these various points at random and could go on indefinitely. Don't misunderstand me. My accusation does not hold against all general practitioners, because I know numbers of them who are excellent, competent, conscientious obstetricians and in whose hands a patient is extremely safe. What I have given you are merely examples of some of the things which one sees.

Taking, then, into consideration what I have quoted from Dr. Meigs' article, the replies to my questionnaire of some years ago, and the other things which I have referred to, I think I have pretty fairly proved that there is considerable abuse in the practice of obstetrics and I think Dr. Pomeroy's question, "Why is the art of obstetrics so poorly practised?" a perfectly justifiable one.

Now, I think I can conclude that, as a rule, the only people who get thoroughly first rate obstetrical care are the well-to-do, who employ a competent specialist, or the very poor who have sense enough to go to a hospital for delivery. The great mass of people in the self-respecting lower classes get, in my opinion, very poor care. Of course, some of them get excellent care, but the problem before us is not how to care for the well-to-do rich, or the poor woman in the hospital, but how is the woman in the middle walks of life, the woman who with her husband forms the backbone of our population—how is she to get proper care at the time of labor, and how is her family to get proper care in any other medical emergency? Of course, I wish only to touch upon the obstetrical side of the question.

Now, what is the cause of this defective practice of obstetrics? That is a very difficult question to answer, but I am inclined to attribute it to three main factors:

First, defective medical education.
Second, lack of special training, and
Third, the indifference of the laity.

What do I mean by defective medical training? Everybody who has studied obstetrics in this country got a very good course, no matter how long ago it was, from the standpoint of oratory. Obstetrics is one of the easiest branches of medicine to teach. The reason for this, Dr. Williams said, was because it is a branch of medicine that can be covered reasonably well in an ordinary course of time, and that as far as the teaching went it had been sound, and that the defects in obstetrical training had not been from an oral standpoint, but rather from the lack of inspiration. He did not feel that this would be welcome until a different type of teacher had been developed, who would be able to impress the students with the fact that he is not only capable and is cognizant of the practical side of obstetrics; that he is not only a good man midwife, but a first-class scientific man who looks beneath the surface; and who is able to impress his students with the fact that obstetrics is a scientific study; and that there are two important things to be considered, namely, "finding out and learning how;" and that there are "very few obstetricians in this country who find out anything or learn to do anything which somebody else hasn't done before." Continuing, the doctor said that our information on this subject has come almost entirely from abroad and that he thought this was the fundamental defect in obstetrics in this country.

The doctor then took up the second point which he felt contributed to defective obstetrics, namely, lack of special training, and said:

"We think that because a young man serves in a hospital as an interne for a few months or even a year that he has learned a great deal. He learns something, it is true, but it is very little, and it is my experience that an interne after one year's stay in the hospital is only useful for his hands. He has another pair of hands which you can direct sometimes, but he is only useful as something to work with. As for his knowledge, it is extremely little, and as for his diagnostic ability in a complicated case it is almost nil." At this point the doctor said that, in his experience, it requires at least a year's training in a hospital to initiate an assistant into the practice of obstetrics and that if he wants to learn to be competent to treat complicated cases it is a matter requiring several years, and he thought three years should be considered as the minimum.

"Another cause of defective obstetrics, to my mind, is the lack of appreciation of obstetrics by the layman. The ordinary person in this country regards childbirth as a perfectly normal procedure and that one man can supervise it as well as another. That is the only explanation for the persistence of the midwife in this country.

Now, the question is this: How can we improve these conditions? That is the hard part. The first way, and I take it the only way, by which we are going to improve conditions effectively and permanently is by a radical change in the general character of obstetrical teaching. What we need in this country are men who regard obstetrics as a scientific career and one in which they can put their entire efforts, and we should teach our students that the things that men see and learn are in the hospital and in the laboratory and not in the size of the fees which they will collect later on. That is the first fundamental. I don't believe we are going to get that in this country until our doctors and obstetrical schools greatly change. I think we are eventually going to get in all first-class medical schools thoroughly well equipped clinical professors who are not only skilled in the care of patients, and in the ordinary methods of instuction, but who are prepared to devote the remainder of their time to productive research work.

In my article upon obstetrical teaching, one of the first questions asked was concerning the special training which had preceeded appointment to the professorship of obstetrics, and I was very much astonished to learn that a number of them had no training at all. Two or three said they never saw an obstetrical case until they became professors and a large number hadn't seen more than a hundred cases. Those times have passed and I think that in another twenty-five years we will be teaching in this country a totally different type of obstetrics. When I graduated in medicine my obstetrical training consisted of but a single case of a colored girl up an alley with eclampsia, and many of you doubtless have had the same experience.

You may perhaps be surprised to know how modern the clinical teaching of obstetrics is in this country. At a gathering of some prominent gynecologists from different parts of the country about twelve years ago at the New York Academy of Medicine, I asked what contribution had been made to medicine by Dr. James P. White, of Buffalo, to justify the placing of his bust in a prominent situation in the New York Academy of Medicine. No one present knew much about Dr. White or his work with the exception of Dr. Matthew D. Mann, who was Dr. White's successor as Professor of Obstetrics at the University of Buffalo. Dr. Mann informed us that Dr. White was the first man in this country to deliver an obstetrical patient before his students, and that was in January, 1850. He delivered an Irish girl before his graduating class and it created such a sensation in Buffalo that the newspapers took it up and the criticisms which arose as a result of it became so acute that he felt called upon to sue one of the papers for criminal libel. That did not end the matter, however, as it was taken up by the rest of the country. During the trial, the evidence in which was voluminous, one gentleman from New York State, said one did not need to see anything in obstetrics, that it was all the sense of touch and you didn't need much of that.

I thought it might be of interest to read you some of the things said about Dr. White. It appears that after the trial, in which he lost out (it was really a Scotch verdict), a letter appeared in the July number of the American Journal of Medical Sciences for 1851 (N. S. XX, 445-51), signed "C. M.," at first believed to have been written by Charles Meigs, Professor of Obstetrics in the Jefferson College, of Philadelphia, but later it was found that Caspar Morris was responsible for it, and before criticising Dr. White in numerous ways, it went on to say:

"Some months since we heard references to the excitement which had been created among the people of Buffalo by an attempt on the part of the Medical College established in that city to introduce 'Demonstrative Midwifery' into their course of instruction. Having ourselves enjoyed the benefit of such instruction while a pupil, knowing that it was still afforded to students of this city, and accustomed to esteem it as highly important, we were not a little surprised to find it considered a novelty anywhere, and yet more to understand how it could be made a subject of popular odium. When, however, we came to be apprised that the improvement consisted in subjecting the process of parturition to ocular inspection in one of its stages, our surprise at the excitement yielded to astonishment that any teacher of the obstetric art should suppose it could be made the subject of the sense of vision, and mortification that the medical profession should have been placed in a position so well characterized to array public feeling in hostility to it. We have never understood the full details of the case until we read the report of the trial and the testimony of the witnesses, etc." In the latter part of the article the writer inveighed strongly against such a practice, and said that were students to become accustomed to ocular instruction, they would, to a great extent, lose their delicacy of touch.

In the following number of the same journal (1851, N. S. XXI, 270), a second editorial appeared upon the subject, in which it is stated that, having received a letter from Professor White in reference to his supposed neglect of the patient, the editor willingly retracted everything which reflected upon Professor White's medical treatment of the case and admitted that "the language of the reviewer was too strong," but, after having made these admissions, he concluded:

"These we consider, however, as points of secondary interest—of importance only that injustice may not be done to individuals—they leave the main question, the propriety and advantage of 'Demonstrative Midwifery' as practised in Buffalo, unaffected. Respecting this, we must concur with the reviewer in all that is said of it, both as a means of furnishing instruction and on the score of expediency and propriety. And these sentiments are not confined, as is supposed by some, to a small minority of the profession. We have yet to meet with a single respectable physician of Philadelphia who does not concur with it; indeed it is, so far as we have been able to learn, the unanimous sentiment of the profession of this city, and if we may judge from the sources of our information, that of a large majority of the profession in the United States."

The discussion did not end with mere newspaper comment and editorials in the medical press, but it was referred to the Committee on Education of the Medical Association, one of the members of that committee being James A. Wood, of New York. In its report at the Charleston, S. C., meeting of the Association in May, 1851, this committee said that it was altogether wrong and that it wasn't necessary to show the student anything at all; and in this connection it might be of interest to state that during the course of the trial one of the physicians, who testified in opposition to Professor White, stated that quite as accurate a conception of the distention of a woman's perineum in labor could be procured from comparative anatomy as from the living subject! As if all that it was necessary to do was to take the student in the spring of the year out to the barn enclosure and have him witness the parturition of a calf and this would be sufficient to qualify him for a Diploma in Midwifery and he would then know how to support the perineum; or if he be somewhat obtuse, why, let him observe with attention the distention of the perineum when the hen lays her egg, and then he will be complete in his studies by the rule of comparative anatomy.

At this juncture the doctor stated that that was the condition of affairs sixty years ago and that he would leave it to his audience to decide the point as to whether any considerable progress in the teaching of obstetrics had been made in that time; and that he was not a pessimist, but rather an optimist. Continuing, he said:

"The education of the laity is going on in a very striking way and I don't think that most people appreciate what is being done. The Children's Bureau, of which I have spoken, is doing a great deal to educate the American women at the present time. In the City of

Baltimore they studied all cases of obstetrics in the year 1915. They started on January 1st and visited over 15,000 women who had had babies in Baltimore a year ago. They are studying this from every point of view and they are, first of all, going to try to find out how many babies were born and how many were alive one year after birth and in the cases of those that died what they died from. What is of particular interest to me is the fact that they are making a statistical study of the attention these women received at the time of labor. They are not going at the thing superficially, but, on the contrary, are going into the homes, and interrogating every woman as to the treatment that she received. They are going to divide it into four groups, 'Satisfactory,' 'Good,' 'Poor,' and 'Bad,' and when those statistics are forthcoming I think a very interesting weapon will be put into the hands of the women in this country and they will be apprised of the fact that it is possible for them to have better obstetrical treatment than they have been getting, and while I have no knowledge of what they are going to say, I feel they are going to say that in order that the treatment shall be considered satisfactory a woman must have had her urine examined at least six or seven times during the pregnancy, and a month before labor must have a thorough preliminary examination, not merely an obstetrical examination and mensuration of the pelvis, but a general physical survey as well. Furthermore, the matter of prenatal care will be taken up in great detail, and great good and a great amount of information will be obtained which we have never gotten before. Just a day or so ago a woman came to see me and said she had been made Chairman of the Committee on Obstetrics of the Mothers' Congress and of the Federated Women of America; that these organizations maintained a journal which has a circulation of I don't know how many thousands; that one page of each number had been set aside for the purpose of bringing before the women of America the problems of obstetrics and she wanted me to write the first page for it. Now, when the lay woman is becoming interested in better obstetrics and when the average woman of the country is going to have this information put in her hands, it is a matter of considerable importance to the average doctor.

"Now, what are the remedies? The remedies are better medical education, longer training for the men who expect to go into obstetrics and the recognition by the medical profession in general that there are two types of doctors as far as obstetrics are concerned, one type which is fitted to cope with any reasonable obstetrical emergency and the other type which is not. One are obstetricians and the other are men midwives, and the woman who wants good obstetrical treatment should go to the former and the woman who wants bad obstetrical treatment should go to the latter. The other point, I take it, is that, in the long run, the average practitioner who has not had a competent obstetrical training should be limited almost exclusively to multiparous women and that the primiparous women should be taken care of by the trained obstetrician or in the obstetrical hospitals. I believe that in the future we are going to see a wonderful change in obstetrical hospitals both for the pauper and for the well-to-do and in the distant future I take it that the first labor of every woman will be regarded as quite as serious a matter as an ordinary surgical operation and that she will no more think of having her baby at the hands of a person who is not specially trained than she would think of going to someone without training to have her appendix taken out. I take it that it is somewhat along these lines that the advance in the education of the public is going to occur, and as soon as women learn how badly they have been treated in the past they will demand better treatment and they will go only to such doctors as they believe are properly trained.

"I am sorry to have presented the matter before you in this way, but hope I have made some of the points clear to you."

"WHY NOT TREAT THE GALL-BLADDER AS WE DO THE APPENDIX?" *

Richard Ward Westbrook, M.D.,

Brooklyn-New York.

IF we place the gall-bladder in the same category with the appendix we may clinch three things in our minds: First, that inflammation of the gall-bladder, like inflammation of the appendix, is a surgical disease; second, that the gall-bladder which produces symptoms should be radically removed in order to get the best results; third, that the sooner such a gall-bladder is removed, the better. This paper, therefore, is a plea for the early radical treatment of gall-bladder disease.

Years ago, when Deaver first insisted that the appendix be removed as soon as the diagnosis of appendicitis was made, provided it were made early, it was quite the fashion to look upon him as an extremely radical surgeon. But Deaver is, on the contrary, a conservative man, and his position on the treatment of appendicitis has been justified as being the best one in the long run. Fourteen years ago, Roswell Park, always a thoroughly sound surgeon, wrote a paper with the title which I have appropriated tonight, in which he stated that it was his practice and his teaching to treat both gall-bladder and appendix alike, and for similar reasons, recognizing, of course, that emergency surgery in the acute attack is not so often called for in cholecystitis as in appendicitis. Park's position, like Deaver's, I believe has been justified as the really conservative one, though for years there has been no unanimity among surgeons on the subject. Twelve years ago, on this same platform, I reviewed Park's paper, and, contrary to his views, advocated drainage of the gall-bladder as the standard procedure, on the ground that we did not know the ultimate effects upon the individual of removal of the gall-bladder, that drainage was a very satisfactory operation, and that cholecystectomy must necessarily have a higher mortality. But tonight, I am glad to record my conversation to cholecystectomy, which occurred long since and has become more and more fixed with increasing experience. I believe with Babcock, that in the hands of the average surgeon, cholecystectomy, even with its technical dangers, will show a much lower mortality done in the early stages of cholecystitis than will cholecystostomy done in its late stages.

During most of the period since Park's paper until recently authorities like the Mayos, Moynihan, Kehr and others have insisted that drainage was the object of operation, as well as the removal of stones when present, and should be the common practice. As a mat-

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* Read before the Medical Society of the County of Kings, Oct. 17, 1916.

ter of fact, these surgeons were removing more and more gall-bladders, although teaching the opposite. Two years ago, when spending some time with Moynihan in England, I asked why I had seen him remove the gall-bladder so much when he held that drainage was the "normal" operation. He replied that he hoped some day to get the cases so much earlier in the course of the disease that only the simpler operation of drainage would need to be done. This position, however, I feel quite sure he would not now hold, in the light of recent statistics and investigations. In Park's paper, he made this statement: "I have never regretted removing a gall-bladder, and have more than once had cause to regret not doing so." I believe this will express the feeling of many surgeons, and it coincides with my own experience exactly.

Early and interval operations have shorn appendicitis of many of its terrors, and we now rarely see in our hospital wards the distressing deaths from general peritonitis, the gaping, sloughing wounds, the fecal fistulae, the sub-phrenic abscesses, and the numerous resulting ventral herniae of the delayed and imperfect treatment of the time of my interne days. This has come about through a wide-spread knowledge and agreement as to the best treatment of appendicitis on the part of both profession and laity. The next most frequent abdominal inflammatory disease is cholecystitis. What do we still see in our wards, only too frequently, as a result of this? Infected wounds, secondary to infected, discharging gall-bladders; unhealed sinuses, discharging biliary contents for long periods over disabled patients; leaking pus-cavities, secondary to perforated gall-bladders; suppurative pancreatitis; and not infrequently the jaundiced face of the case of cancer of the liver, which had its starting-point in the diseased gall-bladder. Of course, much improvement has been wrought in gall-bladder surgery, but it is still far from satisfactory. The fact that it is made up so largely of the late complications of cholecystitis is a sad commentary on the medical knowledge and judgment which allows these cases to drift into the last stages of the disease. It shows decidedly that there is need for unanimity of opinion on the part of surgeons and medical men as to the proper treatment of the disease, and then for the impression of such opinion upon the mind of the laity. Fortunately, questions of treatment are taking up much of the attention of the surgeons at the present time, and will soon be threshed out.

In approaching the matter of early diagnosis and treatment of gall-bladder disease, I think that we have not fully awakened to the fact that it is a surgical disease, not only in its late but in its early stages. Of course, we have all seen cases which improved under rational medical treatment, and cases where symptoms have subsided over long periods, and the patient has finally died of some other disease. But while dieting and careful living, and Carlsbad "cures," may help matters somewhat, they do not cure, and only bring about periods of remission. When the final day of reckoning comes the patient has reached an age of less favorable prognosis, with perhaps compromised kidneys and a weakened heart—not rarely as a result of prolonged toxemia—which with the emergency surgery required will frequently prove too much for him. Early surgery, at small risk, should have given him a comfortable and longer life. I have often marvelled at the years of suffering tolerated by both physician and patient in this disease. It is quite comparable to the unnecessary loss of valuable time, the suffering, and the sacrifice of life produced by the preventable typhoid fever. If physicians really appreciated the true nature of cholecystitis, our desks would no longer be spread over with advertisements and samples of alleged gall-stone remedies, which we very well know are widely used.

What is cholecystitis, and how does it originate? Cholecystitis is an infectious disease of the gall-bladder, and Rosenow of the Mayo Clinic has shown that the infection is usually conveyed to the wall of the gall-bladder through the blood-stream, rather than by way of the common-duct from the liver through the bile, or from the duodenum—the latter being normally almost free from bacteria. The infection then does not make its way through the mucosa, which is constituted to resist invasion, but from behind, and mere drainage is not going to cure disease in the bladder wall. Especially is this true if some primary disturbing focus of infection remain, it may be in the mouth, in the appendix, or elsewhere, which is likely to produce recurring infection in the bladder wall. Rosenow has also shown that certain strains of bacteria have a selective affinity for certain tissues as of the gall-bladder, appendix, duodenum, etc., just as we have long known that the bacteria of the well-known infectious diseases produce lesions in intestines, lungs, skin, etc. It would seem as though bacteriemia were a constant attendant of infectious disease, cholecystitis being no exception.

You will notice that I am saying little about gall-stones. They are not at all a necessary factor in the production of cholecystitis, and the surgeon is today giving them only secondary consideration. It is true that infection may enter the gall-bladder at times from the bile, or from the duodenum, through the common-duct; and it is known that such bacteria become the nuclei of gall-stones under conditions favoring stagnation of the bile-stream. And it is not unlikely, as suggested by Judd,of the Mayo Clinic, that such infection and stone formation may go on without producing the symptoms of cholecystitis proper, that is, not involving the wall of the gall-bladder but only the mucous coat. But having thus once formed the stones become an important factor in predisposing to cholecystitis, just as a fecal concretion in the appendix gives rise to traumatism and obstruction, and predisposes to appendicitis. Complete removal of stones, with simple drainage of the gall-bladder that has carried them, may be sufficient to cure permanently in a considerable percentage of cases. But cholecystitis without stones is met with in many cases and gives the surgeon more concern. Infection alone, without the contributing factor of stones, has produced the trouble here, and the gall-bladder must be removed to prevent recurrence. It goes without saying that the x-ray can hardly be of help in diagnosis here. Too much dependence must never be placed upon the x-ray in preference to the history and symptoms of the case. I have seen cholecystitis giving distinct symptoms where the gall-bladder was so thin-walled and blue in appearance on opening the abdomen with no stones present, that the inflammation could not be recognized until the gall-bladder was opened. Cases without stones have a symptomatology differing from stone cases, and on this, with the variation in thickness of the wall, the appearance of the mucosa, inspissated bile, etc., must the diagnosis be made. The Mayos have called attention to the enlargement of the lymph glands along the cystic and common-ducts in cholecystitis, which is a valuable sign in doubtful cases. They have also described the strawberry-like mucosa, and papilloma of the mucosa of the gall-bladder as conditions resulting from infection and calling for cholecystectomy, if permanent cure is to follow.

We may not expect to accomplish much in early treatment of the gall-bladder disease until we have thoroughly familiarized ourselves with its earliest symptoms, those which precede, sometimes for years in a chronic form the violent obstructive symptoms which the text-books describe as gall-stone symptomatology. These are reflex and toxic symptoms, usually gastric in character, recurring "acute" indigestion, or so-called biliousness, and perhaps slight localizing pain in epigastrium or right hypochondrium. Examination of such patients in the physician's office may show no local tenderness. Headaches and symptoms of intestinal toxemia, myalgic pains and joint symptoms are frequently expressions of the infection. "Fat, fair, forty and flatulent" has been said by some wag to be the symptom-complex of chronic cholecystitis, and it is often no joke. When a patient with such a past history begins to have attacks, often at night, of "acute indigestion," perhaps requiring a hypodermic injection for relief, he or she is quite ready for surgical care. Cases without stones are less acute, but the soreness remains longer and passes off more gradually. Jaundice is quite exceptional in early cases. A marked characteristic of acute exacerbations of cholecystitis is the irregular times of attack as compared with the regular pain of duodenal ulcer with its tendency to periods of remission. Mayo states, however, that the strawberry type of gall-bladder inflammation is often mistaken for duodenal ulcer, showing some symptoms at all times, but prolonged periods of weeks of great improvement. This should always be borne in mind when abdominal exploration does not demonstrate an expected ulcer, as the gall-bladder without stones may be the offender. Undoubtedly up to the present, we have overlooked many cases of cholecystitis without stones in abdominal exploration, and thus have failed to give relief.

Granting the advantages of removal of the damaged gall-bladder of advanced disease, are there any disadvantages to the individual if made the subject of early radical removal? Can he get on just as well without the gall-bladder? I think we may now say positively that he can. Clinical experience, as far as I am concerned, has shown that patients lacking a gall-bladder for ten to twelve years may be perfectly normal in their digestive functions. No operation has yielded so good results as cholecystectomy in the hands of many surgeons for the same period. A possible disadvantage might be the loss of the gall-bladder as a natural drainage-tube in the occasional re-operation on the ducts, but not an insuperable one. Whatever the function of the gall-bladder—and no one has surely determined that as yet—it is not essential in the economy of the individual. Some species of animals possess it, and other kindred species do not. Where the gall-bladder is not normally present in lower forms, the bile-ducts are said to be proportionately larger. Judd has shown by experiments on dogs, and observations on the human-subject, that "compensatory" dilatation of the common-duct results after removal of the gall-bladder. The sphincter, also, at the bowel end of the common-duct becomes relaxed and the bile flows easily into the duodenum without back pressure on liver or pancreas. This has value in the fact that chronic pancreatitis may be treated by cholecystectomy rather than by drainage of the gall-bladder, especially if due to cholecystitis without stones.

If the advantages of removal of the gall-bladder be so positive, why should there still be diversity of opinion regarding it among surgeons? The objection is almost purely on technical grounds. It is first of all a more difficult operation, and should, therefore, it is said, have a higher death rate. Bloodgood and some others have vigorously opposed cholecystectomy as the standard procedure, as carrying large risk of injury to the common and hepatic ducts, hemorrhage from the vessels, and sepsis from bile-leakage from the stump of the cystic duct. These are positive dangers, and it is an operation not to be attempted by the tyro. But in the hands of the surgeon experienced in upper abdominal operations, who can make careful dissection and select his cases properly, it will not show increased mortality. In late and complicated cases, cholecystectomy is one of the most difficult of abdominal operations. In acute empyema of the gall-bladder, cholecystectomy is not usually difficult or unsafe, where good exposure is possible, and the condition of heart or kidneys does not contraindicate. Leakage of bile from the cystic duct need rarely occur in early cases. I have been accustomed to tie off the cystic duct with one or two ligatures of Pagenstecher linen, in early cases, and have at times even omitted the precautionary drain to the stump, and closed the abdomen tight, with good results. Where the duct is acutely inflamed and friable, leakage is bound to occur in a certain percentage of cases, within a few days of operation, and must be provided against with proper drainage to the skin surface.

Which technique should be followed in excising the gall-bladder is a matter of individual preference. Preliminary dissection of the cystic duct and artery, tying off the same, and the separation of the gall-bladder from within outward, is the nicer technique in earlier cases. But in acutely inflamed gall-bladder, I have usually found it easier to peel the gall-bladder out from without inward. This is the safer method, too, for the occasional operator. With gentle enucleation, hugging accurately the gall-bladder and cystic duct, there is little hemorrhage. Injury to the common-duct is most likely to be brought about by injudicious plunging with artery forceps after a bleeding-point.

The question of whether to drain or excise the gall-bladder must, after all, be left to the judgment of the surgeon. Indiscriminate employment of cholecystectomy would certainly increase mortality. Where removal becomes an additional risk in a patient who is very ill, drainage should by all means be done, and removal may have to be done later. Where the common-duct or pancreas is involved, I usually prefer to retain the gall-bladder, unless hopelessly diseased or deformed. Cholecystectomy is said to be contraindicated when another major operation has been done at the same sitting, as hysterectomy or umbilical herniotomy. This need not be so, as we have done hysterectomy, appendectomy, and cholecystectomy at the same sitting, with little blood-loss, and the patient has borne it extremely well. I have had to remove an acutely inflamed appendix and an acutely inflamed gall-bladder, occurring simultaneously, at one operation with excellent result.

Only ten years ago, Maurice Richardson, of Boston, said that the one established therapeutic fact in biliary surgery was the value of external bile drainage. The old operation of drainage was then, and is now, a good operation in its place. But drainage of bile to the surface is quite unnecessary in the majority of cases, and may safely be entrusted to the common-duct. There are disadvantages, also, in the continued loss to the patient of all the bile.

The return of symptoms in from ten to as high as twenty-five per cent of cases has been noted after drainage of the gall-bladder, including occasional cancer of the gall-bladder. One may now safely say that the infected gall-bladder should always be removed unless advanced to the point of contraindicating complications. Just as, after the profession learned to cope with acute appendicitis, it learned the symptomatology of the chronic form, as a cause of chronic digestive disease, so now we need to familiarize ourselves with the symptomatology of chronic cholecystitis. Early cholecystectomy gives the surest relief, and forms the best prophylactic measure against the dangerous common-duct and pancreatic lesions. Recent years have shown that Roswell Park was right when he said, "Treat the gall-bladder as you would the appendix."

THE MANAGEMENT OF SOME OF THE SERIOUS COMPLICATIONS OF GONORRHOEA.*

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PHIMOSIS, not often thought of as a gonorrhoeal complication, occurs occasionally in men with long narrow prepuces, during the early stages of an acute attack. Usually rest and hot soaks will reduce the intense lymphatic congestion of the prepuce and it can be readily retracted after a few days duration. It is seldom dangerous but it may be deadly—in the following manner. The subpreputial membrane becomes eroded by the retained secretions; in the presence of the low grade edematous tissue, organisms of the streptococus family may find lodgement in the tissue and blood stream with a resulting local gangrene and sometimes fatal systemic poisoning. I have seen four such cases with two fatalities.

The attending physician's part is to be on the look out for signs, local or systemic, and immediately to make a dorsal slit for the purpose of cleansing and keeping clean the infected area and to introduce proper systemic support. Iodoform, hot sitz baths, at times continuous, alcohol internally and forced feeding are indicated.

FOLLICULITIS; periurethral abscess. Sometimes the gonococci (with other organisms) in Littre's glands or Morgagni's crypts do not find outlet into the urethal canal but are discharged through the bottom of the gland or crypt into the surrounding urethral tissue, into the space between the urethral wall and the deep strong fascial sheath binding the corpora of the penis. If left alone it may be limited here for many weeks and finally break through the skin. Many men in general practice encourage this by the applications of hot poultices. This is bad practice, for when the infection breaks through the bottom of the gland into the periurethral tissue, nature makes a conservative effort to wall off the pus by throwing around it a barrier of small round cell infiltration; soon this becomes organized into fibrous tissue and when the abscess is finally opened by the knife or spontaneous rupture, there remains a mass of scar tissue about and in the walls of the urethra. The result is a tough, dense urethral stricture of the penile portion, a permanent downward curve of the penis on erection resulting; this may be a good shape for a scimeter, but for a healthy young adult it is a source of dismay, disgust, often despair.

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Treatment.—Incise the little nut-like mass as soon as it is well defined; increase all efforts to reduce the acute gonorrhoea that the use of urethral dilatations with sound or dilator may be begun promptly while the infiltrate is soft. There is no danger of urethral fistula from early incision.

Epididymitis. The treatment consists of Rest, the application of various medicaments and of heat and cold, the injection of vaccines and serums and the employment of surgical measures. The use of bacterins and serums is in the same indefinite but encouraging stage as is their employments in other infections. The discussion of the application of heat and cold is never new and always in order. Cold, ice cold applications to an acutely inflamed epididymis afford relief from pain.

Persisted in for any length of time their use is followed by the infiltrate in the head of the epididymis becoming more dense and not readily absorbed; and more cases of permanent blockage of the vas are believed to result. A far greater danger is through the too long continued application of the ice pad by the patient, occasionally resulting in complete destruction of the urethral tissue. The appearance of gangrenous spots along the urethra may be the first sign of the destruction which has been going on beneath the anesthetic ice pad. Fistulae result which are exceedingly difficult of cure. I have seen two such cases. Surgical relief, in the form of Hagner's operation is indicated in two conditions. First when the pain is excessive, not controlled by opiates and persists more than three days. Second, when there are recurring exacerbations of the swelling in the epididymis, rendering the patient unable to work regularly. In two-thirds of the cases small foci of pus containing gonococci or other organisms are found and recovery will follow. In all cases the pain ceases in from twelve to twenty-four hours after the operation. In those cases which have frequent exacerbations after the operation, epididectomy is indicated as the epididymis is frequently found to be functionally destroyed or the vas blocked, both of which conditions produce sterility and by the removal of the epididymis a source of constant infection is gotten rid of.

Vesiculitis as a source of infection, local and systemic, may be relieved by massage and vaccines. If these fail, exposure of the vas deferens and an injection through this of some of the albuminates of silver salts is indicated. In chronic cases with a large amount of tough perivesicular infiltrate present, incision and drainage by Fuller's method is of some value. The technique is not easy. There is very little danger to the patient in the hands of one who has learned to do the operation as Fuller advises.

Prostatitis. Chronic prostatitis may present definite well-marked symptoms or the gonococci may lie in the prostatic tubules and give no indication of their presence until there occurs an unexplained urethritis or a post martial gonorrhoeal infection. It cannot be too often stated that a candidate for matrimony, with a history of previous infection, should not be passed as cured simply because he has no present symptoms and the urine is clear of shreds. Massage and irrigations, vaccines, Faradism and the treatment of the accompanying posterior urethritis will effect a cure in 95% of these cases. In the presence of acute prostatic abscess, if, when the finger per rectum can distinguish a prostatic tumor with a soft spot, and the temperature persists at 104 or over for four days, or retention develops, operation is indicated.

Drainage ofthe prostate can be done through means of a perineal section or by approaching the prostate through the space between the rectum and prostate. The former is the easier and safer method. I have never seen ap erineal fistula persist after this procedure. Massage of the prostate should not be begun until all post-operative trauma has disappeared.

Glandular Urethritis. Some cases of gonorrhoea present constant exacerbations when the prostate is free from infection and there is no stricture or membranous inflammation. An endoscopic may reveal a couple of "Littre's" glands with gaping mouths in which pus can be seen; the appearance is that of a pin head speck of yellow. If urethral dilatations and irrigations have already been employed, destruction of the gland by cautery, electrolysis or a knife introduced through the urethroscope is the only method of cure.

So-called Gonorrhoeal Rheumatism. When the gonococcus is on his native heath in the mucous membrane of the urethra and its adnexa, he is a pest, a devil in his own home town, so to speak; but when he migrates thro means ofthe blood stream to the joints, the endocardium, the sclera, he is worse than that and hard to root out by any direct methods, if nature's protective mechanism cannot be stimulated. Treatment consists in finding and eradicating the focus of infection.

Rest, relief of pain, Bier's bandages and baking when joints are involved. In the presence of chronic effusion in a joint, blistering will often promote absorption. But in the most obstinate cases; the cases concerning which we cannot say why they do not get well any more than we can say why some do recover, often all our remedies and measures fail utterly.

Here for the present certainly, our expectation of developing some specific remedy, lies in the discovery of the nature of the body's protective mechanism and experimentation with remedies suggested by this process. For success here will be followed by the development of some specific antigonorrhoeal remedy, and that would mean the curing of this scourge at the acute stage which would enable us to discard the clumsy mechanical measures now in use.

The use of vaccines and serums has been on the whole, disappointing, occasionaly some marked, definite result stimulates hope anew and leads us to believe that we are on the right way to a real discovery.

For this reason a statement of some of the problems involved, the progress made by laboratory investigators, and a report of some clinical studies with horse serum injections in these cases may be of interest.

Long ago Hippocrates declared that every disease carried its own cure. The cure of disease by means of vaccines rests primarily on the assumption that the production of specific antibodies can be increased by injection of specific vaccines. In the early vaccine days Wright thought that the dosage could be regulated by the opsinic index; this was found to be unreliable, for one reason because it measured only one of the factors of immunity. The laboratory work involved was tedious and required experts, so we were glad for an excuse to drop it; but with the laying aside of any attempt to scientifically control the administration of vaccines the profession passed into a period of clinical routine administration by guesswork. Hence the medley of failures, dramatic successes, more failure and occasionally fatalities.

At this time it is the opinion of many careful observers that the specific vaccine treatment may be of great auxiliary value in stimulaing the defensive resources of the organism. The most reasonable view at present is that the beneficial results are due to the increased production of antibodies. Lately attention has been centred on the value of other factors notably stimulation of leucocytic activity, liberation of non-specific ferments and protein fever. It is only by postulating these other factors that we can form working hypotheses to explain the beneficial effects from vaccines in acute conditions.

For the original theory was that the specific disease germ was walled off, did not therefore produce antigens to stimulate the antibody producing mechanism. In acute conditions this was not so, the bacteria were free and hence the body was producing all the antibody of which it was capable.

Gay concluded from his experiments, of introducing intravenously typhoid vaccines in cases of typhoid fever, that the beneficial results were due to the combined action of specific antibodies and increased leucocytosis. Now the same results may be produced by the introduction of nonspecific vaccines and by albumose. That is, the foreign protein is the element in stimulating the body's defensive mechanism.

Jobling and Petersen suggest that the injection of nonspecific vaccines or other foreign proteids, mobilize nonspecific ferments which may break down the fat envelopes of the invading organism and render it more liable to destruction. (Thus offering some hope of curing the disease and not producing a mere temporary improvement, as do the majorities of the treatments.) Miller & Lusk report typical reactions with increase of leucocytosis following injections of typhoid bacilli and also with proteose (confirming Jobbling & Petersen's work).

They also used the same remedies in arthritis, all forms, with resulting typical reactions and often marked improvement.

Following these suggestions, I have been using subcutaneous injections of horse serum in cases of gonorrhoeal rheumatism. In these cases, most of which were done at the Kings County Hospital and a half a dozen in private practice, there was the same type of reaction and results; all showed temporary improvement, as evidenced by less pain and more freedom of movement in affected joints. Of twenty cases which were kept under observation: three showed no improvement when last seen; five were cured, no relapse in four months ;twelve were benefited but had relapses; of these two were old chronics who had been under my personal care for many months. Vaccines and other measures had afforded no relief. Under injections of horse serum they have been markedly benefited. We begin with five c.c. of serum injected subcutaneously in the thigh, this is repeated every two days until a marked reaction appears. Chill, rise of temperature and an intense urticaria are the prominent clinical signs of the reaction. The local swelling at the site of injection is sometimes enormous; it is not red, tender nor painful but may be alarming by reason of its bulk. Reassurance to the patient is necessary. All will disappear in a few days without damage.

Intravenous injections of the serum are not safe unless the patient is under direct control in bed; the renal and cardiac conditions known and in small doses of the serum intravenously having been previously tried for any signs of anaphylaxis.

THE REPLACEMENT OF MORPHIN IN SURGICAL PRACTICE WITH A REPORT OF 110 CASES.

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IN spite of the drawbacks which are recognized as attending the use of morphin, this drug, either alone or in combination, has been until recently the sheet-anchor of the surgeon in comfortable psychical and physical irritability and suffering, prior to and following operations. While we have been compelled to use it, we have done so with a full realization of the disturbing and sometimes dangerous effects and after-effects often produced by it, and ever present has been a fear of the foundation of an uncontrollable habit.

When I became acquainted with the observations of Bürgi[1] as to how an absence of the undesirable by-effects of morphin could be attained, and learned that in such institutions as Bier's Clinic pantopon had largely superseded morphin in surgical practice, I undertook to investigate the matter by conducting a series of experiments with a view to discontinuing the use of morphin in our own hospital if our observations should warrant it.

Our first series of 110 cases has justified our expectations; a few histories are given on the following pages as typical of the character of the work carried on and of the results obtained. In a metropolitan hospital like ours in which a very large number of charity cases are treated, it is not to be wondered at that a high percentage of the operations performed refers to repairs of accidents. In such cases, as well as in those referred from our Pathological wards, pantopon gave us results superior to those we have been accustomed to from the administration of morphin or morphin and atropin.

The sedative action of pantopon and the psychic control rendered possible by it were observed in the comfortable mental condition and appearance of the patients, the fine capillary color of their skin, etc., while they were being brought to the operating table; the anaesthesia progressed with an observable diminution of the quantity of anaesthetic used; also in the continued condition of the patients during anaesthesia and the noticeable freedom from depression or shock following operation.

Our experiences have shown us that with pantopon the postoperative condition of patients is markedly improved compared with what we had been accustomed we uniformly observed[1] an absence of cardiac or pulmonary change, as there was apparently no depressant action,[2] a normal free secretion of urine,[3] but rare occurrence of nausea or vomiting,[4] an absence of ballooning-up or tympanitic condition of the intestines; flatus was voluntarily expelled and rectal tubes were very little used.

Some cases received pantopon in combination with atropin while other cases received pantopon alone. In either case the results were much superior to those obtained through the administration of morphin or morphin and atropin.

Even in cases complicated by cardiac, pulmonary or renal lesions the same undisturbed conditions were attained and perhaps most important of all, while most of the cases received repeated doses of pantopon after operation, the effects of which were clearly shown in an improved psychic control, we never encountered difficulties in discontinuing injections or oral administration when for our purposes they were no longer needed.

Post-operative vomiting occurred in only 3 of our 110 cases and we are inclined to believe that too much time elapsed in these particular 3 cases between the preliminary injection of pantopon and the beginning of the ether narcosis.

We would like to state that our observations on the first series of 110 cases were completed before the article from Johns Hopkins Pharmacological Laboratory appeared in print,* which on the basis of pharmacological experiments on the action of opium alkaloids reaches conclusions similar to our own.

This first series of cases required an average of 3 to 4 ozs. of ether, while the average of 1,000 cases previously operated on in our hospital shows an average of 6 ozs. to maintain anaesthesia.

The technique most usually followed was: 1 hour before operation 1/6 grn. pantopon was injected and this dose was repeated 30 minutes before operation; after completion of surgical interference an injection of 1/3 grn. pantopon was given followed by 1/3 grn. pantopon every six hours for forty-eight hours. Accident cases brought in from the street received larger doses of pantopon when necessary.

The following case histories may serve as average examples of results obtained. Clinical data which have no bearing on our subject are omitted.

No. 585—Male, aged 34 years. Operation—excision of caecum. Pantopon grn. 1/3 an hour before operation; repeated after operation. No nausea or vomiting followed operation.

No. 572—Female, aged 26 years. Operation—appendectomy complicating pregnancy. Pantopon grn. 1/3 half hour before operation. Vomited once an hour after operation—none thereafter.

No. 549—Female, age 19 years. Operation—appendectomy for gangrene and perforation of appendix. Pantopon grn. 1/3 an hour before operation. No vomiting followed operation.

No. 492—Male, aged 35 years. Operation—nailing fragments of fractured and dislocated ankle. Pantopon grn. 1/3 before operation—slight nausea following operation.

No. 489—Male, aged 45 years. Operation—amputation of three fingers. Pantopon grn. 1/3 half hour before operation—no emesis following operation. Comfortable all night.

No. 326—Male, aged 72 years. Operation—Gastrostomy. Pantopon grn. 1/3 an hour before operation—no nausea or vomiting after operation.

No. 323—Female, aged 19 years. Excision of upper third of tibia for exostosis. Pantopon grn. 1/3 before operation—no vomiting following.

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* The Journal of Pharmacology & Experimental Therapeutics, Dec., 1916, page 216. D. I. Macht states that "pantopon is more analgesic than morphin and at the same time less depressant on the respiratory center, and furthermore that it is less apt to produce nausea and vomiting."

No. 273—Male, aged 49 years. External perineal urethrotomy. Pantopon grn. 1/3 before operation—no nausea or vomiting following. Pantopon was repeated for excessive pain.

SUMMARY

1. We replaced morphin medication in our surgical wards by using pantopon.

2. The sedative effect of pantopon was very noticeably greater than that of its morphin equivalent. Respiratory and cardiac depression were far less marked than when morphin was used.

3. Post-operative nausea or vomiting,
4. Constipation,
were very much reduced through our new method of procedure.

5. Intestinal stasis or paralysis,
6. Anuria,
were not observed in a single case.

7. Patients suffered no inconvenience when administration of pantopon was discontinued.

For valuable aid and collaboration in the work I am indebted to my assistants, Dr. P. Schoenfeld and Dr. J. Z. Raily.

TYROTOXICON POISONING WITH MYOCARDIAL DEGENERATION AND DILATATION.*

Robert Franklin Ives, M.D.,

Brooklyn-New York.

AT the present day, there is a tendency to underate the virulence of the alkaloidal bodies produced by certain microorganisms on proteid material. The unexpected cases of poisoning by ptomaines therefore suddenly awaken one to the realization of the potency of these toxic substances for evil and their destructive action upon the heart muscle.

Tyrotoxicon, the substance here questioned, was discovered by Prof. Victor C. Vaughan in 1883, and proved to be an intensely poisonous benzene derivative found at times in milk and cheese.

Freezing does not impair its activity so that in the form of ice cream it may be admitted to the human system and its highly toxic action developed.

The case to be cited proves very instructive, as demonstrating the selective influence of this substance upon the myocardium.

Mrs. F. W., age 53 years, weight 130 pounds, height 5 feet 4 inches, *previously in good health.*

During the month of July, 1915, she partook of a portion of ice cream manufactuerd by a local ice cream company, and obtained from a small Italian confectioner.

Within 8 hours, symptoms of irritation of the gastro-intestinal tract presented: Abdominal pain, with vomiting and diarrhoea, and a marked sense of exhaustion.

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* Read before the Brooklyn Pathological Society, Dec. 14th, 1916.

A second portion of the same make of ice cream, obtained from the same source as the first, was eaten on the third day: The patient at once feeling nausea, and within a few hours having a violent chill, followed by epigastric and general abdominal pain, colicky in character. Muscular cramps in the limbs proved exceedingly annoying, and the prostration was most marked; the stools showing traces of blood.

The history states that for seven days the patient continued to have loose movements, abdominal pain, and blood in the stools, with increasing bodily weakness. Castor oil, epsom salts and light diet failed to check the diarrhoea.

While in this condition, about ten days after the first portion of cream was taken, the patient again obtained and ate about one pint of the same make of ice cream from the same unsanitary Italian store.

Within three hours the patient again developed a violent chill, vomited repeatedly, and suffered with intense remitting abdominal cramps, profuse diarrhoea with large quantities of blood with stools and a most distressing tenesmus.

At this juncture, the writer was called *for the first time,* to find the patient in a state of collapse pale, pulseless, with cold sweats and semi-conscious.

Positive treatment with caffeine, atropine, petuitrin and morphine, with heat to the body slowly restored the waning vitality, and a gradual return of pulse and warmth resulted. A trained nurse was at once installed, and a battle royal begun.

During the following week the patient hovered between life and death, the radial pulse just palpable, the cardiac sounds at the apex very faint, the first sound almost inaudible.

The temperature never rose above 100° F. by rectum.

The cardiac enlargement to both right and left showed the right border 4 c.m. from the midsternal line to the right, and reaching the nipple line on the left. A diffuse pulsation was visible between the second and fourth left spaces, and a noticeable epigastric pulsation was present.

The blood pressure with a Nicholson Hg. Sphygmomanometer registered a constantly low pressure. The systolic between 100 to 105 m.m., the diastolic at 90 m.m., giving a pulse pressure of 15 m.m. Pulmonary congestion with cough, cyanosis and repeated fainting attacks were met with caffeine and petuitrin subcutaneously.

The normal cardiac rhythm maintained throughout with the exception of an occasional premature beat.

The Polygraph tracing, taken with difficulty, showing No Fibrillation or Heart Block. The jugular tracing giving a normal A. C. interval. The vomiting proved intractable; resisting all measures until the cardiac strength revived, finally yielding to drop doses of hydrocyanic acid dilute. The bloody stools gradually lessened.

During the second week, paralysis of the left leg and foot appeared, showing involvement of the External Popliteal or Peroneal Nerve.

The cardiac involvement was most marked. For three weeks the patient lay exhausted. Gradually the ability to move without fainting presaged a return of cardiac power. Under the use of carefully adjusted doses of digipuratum progress became manifest. So low was the vitality of the tissues to resist the subcutaneous injections, that several areas became necrotic and healed after the removal of a large slough.

The recovery of this patient was due, we believe, to the constant watchfulness of two competent nurses and to the very positive medication instituted during the many critical hours.

Microscopical and chemical examination showed a urine of low specific gravity 10 10, with positive albumin, many hyaline casts; positive urobilinogen, and very positive indican.

The blood count showed hemoglobin 90%—red cells, 4,750,000; whites, 10,000 with a differential count of 100 cells, showing Polys. 75%.

The question now arises: What was the cause of this great prostration? And what was the pathological feature presented?

The recovery of the case leaves unknown the extent of the myocardial damage, but that very great involvement of the musculature took place; that its acuteness was evidence of the toxic substance (Tyrotoxicon) found in the ice cream leaves no question in my mind.

Two other members of the home were affected but in a lesser degree.

More and more it is being realized, that the toxins of all of the acute infections, or the ptomain toxaemias, promptly and positively affect the heart muscle.

Depending then upon the virulence of the poison and its amount in the circulating blood, will be the influence upon the heart muscle cells.

Microscopical examination of these cardiac muscles, where death results, proves the lesion to be primarily an albuminous or parenchymatous degeneration of the heart muscle cells.

Granular degeneration. Very similar to the ischaemic atrophy seen to result from coronary sclerosis and obstruction also occurs. The cells are swollen, the cytoplasm is obscured by the presence of these coarse granules which are scattered throughout the cell. The striations are obscured or lost early in the infection. In the severe types, the nucleus, as well as the cytoplasm becomes involved, resulting in a hopeless condition so far as restitution or cellular regeneration is concerned.

This granular degeneration is often accompanied by some degree of fatty degeneration.

It is important to recognize that while clinical recovery may take place in these cases, as has happened in this case, the functional integrity of the muscle is never wholly restored, or the power of the heart to accept the burdens previously borne with impunity, returned.

The diseased or degenerated muscle cells are replaced, in the process of recovery, by a fibrous replacement, lacking in tonicity, and tending to stretch or dilate under the pressure of the circulation—evidence of Chronic Myocarditis.

This lack of tonicity was evident in this case, as proved by the marked dilatation.

Attention is called to the clinical evidence of the circulatory failure: The sudden overwhelming of the cardiac reserve; the sudden destruction of the cardiac tonicity, evidenced by the shock, the cardiac depression, the loss of the heart tones, the low pulse pressures, and finally the gradual stretching of the heart muscle itself—*Dilatation.* Without doubt, the issue would have ended fatally had not positive medication come to its support.

The lessons to be drawn from this case:

I. The virulence and selectiveness of the Tyrotoxicon poison for the cardiac musculature.

II. The coincident loss of the property of Cardiac Tonicity, with the parenchymatous degeneration.

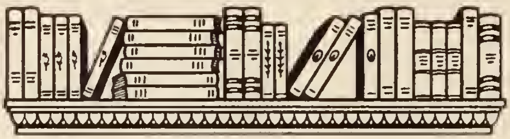
III. Its inevitable sequella—Dilatation.

IV. The virtue of Caffeine in these cases of Acute Myocardial involvement.

V. The virtue of the specific drug Digitalis, in the later stages.

VI. The necessity of granting and insisting upon long periods of rest in these cases of Toxaemic Degeneration.

Finally: The patient today, one and one-half years later, though able to be about, recognizes very great limitations in her ability to work, and finds it necessary to take moderate doses of digitalis from time to avoid exhaustion.



EDITORIAL

AN EXAMPLE OF EFFICIENCY.

SOME time ago the Legislature of the State of New York passed a bill requiring that massage operators must be licensed and prescribing the regulations for the purpose. It is probable that those masseurs who chance to belong to organized societies were informed of the bill and how to meet its requirements, but apart from a very inconspicuous newspaper notice, no one else was so informed and very few know of the existance of the law.

Under these circumstances the experience of an individual masseuse furnishes an illuminating commentary upon the way in which our state and municipal government conduct the business for which they are elected by the people and how much in the people's interest (?) this administration is. The lady in question was told by a friend that she had heard from someone else that it was necessary to get a license. No, she did not know where to go to get the license, but suggested that the Kings County Medical Society might know. The Kings County Medical Society regretted their lack of information, but suggested that the County Clerk of Kings County was a well spring of knowledge and that his office could undoubtedly supply the information. The County Clerk's office referred the applicant to the Borough President's office at the Borough Hall, where, after visiting three separate minor officials she was directed to the headquarters of the Health Department in Brooklyn; she did not know, unfortunately, that the Health Department in Brooklyn is conducted from the headquarters in New York, and so it was necessary for her to journey to Centre Street where they told her that she would have to have an examination as she was classified as a food handler, but that before the examination could be given she must get and have filled out her license papers, and they referred her to 149 Lafayette Street. At this last address, after several fruitless inquiries, she was at last directed to a window marked "Hucksters, Peddlers and Stands," where a young man who was busily engaged in writing and eating simultaneously was unable to tell her why she was classified thus, but did find time to throw her two papers and tell her to have them sworn to. She next applied for a health certificate to be filled out by her private physician and was told that it could only be given to the physician in person. The Bureau conducted by Dr. Harris in the Health Department was appealed to by telephone and the information patiently and courteously given that only on the written request of her physician could one of these precious forms be obtained. It was obtained on the stipulation that a written request be forwarded at once; the form itself appeared in a recent Health Department Bulletin and is merely an identification form mimeographed on a 3 x 5 filing card and requiring information as to active syphilis, gonorrhoea or other communicable diseases.

Why a masseuse should be classed as a food handler except in the sense that she occasionally handles raw material for cannibals is not easy to explain, and it is more difficult yet to understand why the profession is listed among hucksters, peddlers and stands. The experiences of this one person will doubtless be duplicated many times in the course of the next few months, as first one and then another masseur realizes the demands of the law. The whole situation is a splendid example of how well the Government is living up to its slogan of economy and efficiency. What if a few self-supporting hard working men and women are inconvenienced? One is reminded of the efficiency expert who told a Virginia farmer that his hogs would digest their food in half the time if he soaked the corn. The farmer replied, "what is time to a hog?" H. G. W.

DOES BROOKLYN NEED ITS OWN HEALTH COMMISSIONER?

EVER since consolidation made Brooklyn a part of greater New York there has been a certain degree of friction between Brooklyn practitioners of medicine and the Department of Health, which has finally brought about the introduction of a bill in the legislature calling for a Health Commissioner for Brooklyn and Queens to replace the Port Officer as a member of the Board of Health, a step that will in time probably be followed by the appointment of commissioners for each one of the five boroughs.

It has been evident ever since the appointment of Commissioner Goldwater that centralization was the key note of the Health Department's policy and, in theory, centralization of authority makes for efficient management and economical administration. It would be difficult to combat the theorem that one large laboratory is more economical than five small ones, that one commissioner is less expensive than five and that centralized management obviates wasted energy and reduplication of administrative duties; and yet the fact remains that the Brooklyn physicians and Brooklyn newspapers are urgent in demanding a degree of autonomy in the administration of Health Board affairs for Brooklyn. It would be too long a story to trace out and recite the multitude of small grievances which have led up to the present situation, but the very fact that the situation exists proves that there must be adequate causes back of it and those causes cannot all be imputed to Borough pride or to Brooklyn provincialism. The territory of the Greater City this side of the East River is so much larger and the growth of population so much more rapid than Manhattan, and the time is so near when the bulk of the population will live in Brooklyn and Queens, and there are so many purely local conditions to be considered that it is right and proper for Brooklyn to have adequate representation in the Health Board. Citizens of New York are never slow to assure Brooklynites that Brooklyn streets have been paved and Brooklyn sewers built and Brooklyn advantages gained largely through Manhattan's taxes, and that, therefore, Brooklyn has gained every thing and lost nothing by consolidation. In spite of this the Brooklyn tax rate is higher than ever before and Brooklyn feet have to travel many more weary miles to get the same privileges that Brooklyn enjoyed as an independent city. If the removal of Health Board records affecting the Borough of Brooklyn to Manhattan means anything, it means that Brooklyn citizens will be illegally compelled to travel many more miles to get the information they seek and, with the constant trend of population toward Queens, this inconvenience will grow into a positive burden. As has already been said, Brooklyn and Queens form too large an area to be administered outside of themselves conveniently for their own inhabitants and we would respectfully point out that it is the citizens who are to be considered and not the Health Department. It is doubtless most desirable that the City's expenses should be systematized and kept down, but when this is done at the expense of the individual it constitutes false economy. It is just as essential that there should be a representative of each Borough to further its interests in the Health Board as that it should have representatives at the State and National Capitol. There are many who believe that the socialistic tendencies of the Health Department as at present constituted are not in the best interests of the bulk of citizens and of the physicians who make the Health Department possible, and it is right that each Borough should have an authoritative voice in determining the general scope of Health Board work as well as in administering the sanitary code. For this purpose assistant sanitary superintendents or any other officers appointed by the Commissioner himself and subject to his direct control are inadequate. The appointment of a Borough Commissioner is as essential as the election of a Borough President for much the same reasons and it is to be hoped not only that the law will be passed but that future legislation will provide a Commissioner for each borough. H. G. W.

IN MEMORY OF PAUL MONROE PILCHER, M.D.

An Address by

Walter A. Sherwood, M.D.

Delivered before the Brooklyn Surgical Society at its Open Meeting, February 1st, 1917.

IT is both a strange and tragic happening that, on January fourth, the day scheduled for the previous monthly meeting of the Brooklyn Surgical Society, those powers which regulate our existence and control our destinies should have seen fit to take from us Paul Monroe Pilcher, one of the most active members of this Society, a man of the highest purpose and character, a rare and stimulating personality.

Known to all of us as a surgeon of singular distinction and ability, nationally and even in foreign lands recognized as such, widely esteemed as a man, firmly and affectionately held in the minds and hearts of a vast host of associates, patients and friends, he, indeed, touched our lives on many sides and at many vital points, and tonight it is not only difficult to realize that he will no longer continue to take his active and important part in our affairs and those of this Society, but it is also impossible to understand why such a gifted and versatile life, in the full vigor of useful and productive service and on the very threshold of its greatest period of accomplishment, should, at the age of forty, have been sacrificed.

In the lives of our generation such a calamity marks a milestone which causes us to pause, think and wonder, and for a time lose heart.

As the result of a most intimate personal association with Dr. Pilcher during the past eighteen years, culminating in a friendship which had no limitations, it is impossible for the speaker to adequately express even a small part of that which he feels.

Paul Pilcher's life and work need no eulogy, but it seems fitting and proper that, as a slight tribute to his memory, this meeting should take special cognizance of one who, during the past decade, has been such a leading and potent factor in the progress and standards of both the art and science of Surgery especially in its relation to Brooklyn.

Born in this city on the eleventh of April, 1876, Dr. Pilcher prepared for college at the Brooklyn Polytechnic Institute after which he entered the University of Michigan, the Alma Mater of his father, and there in 1898 received his Bachelor's degree. He graduated in Medicine from the College of Physicians and Surgeons in New York City in 1900 and at the same time the degree of Master of Arts was conferred on him by Columbia University.

The following two years were spent on the interne staff of the Seney Hospital and this practical experience was supplemented by a year in the Universities of Goettingen, Vienna and Berlin, where as a student of surgical pathology and the diagnostic use of the cystoscope with such men as Koenig, Orth, Nitze, Von Frisch and others, he laid the foundations for his work in the Surgery of the Kidney, Ureter and Bladder, which work he later developed and

perfected with so much credit and distinction to himself and this community.

After returning to Brooklyn, Dr. Pilcher began the practice of Medicine in association with his father, Dr. Lewis S. Pilcher, at 145 Gates Avenue, where he continued his work up to the time of his recent illness.

As the result of environment, association and previous training, his chief interest was early centered on the surgical side of his professional work and at various times he held surgical appointments on the Visiting staffs of the Seney, German, St. John's and Jewish Hospitals.

In 1910 he voluntarily relinquished these hospital affiliations in order to devote his entire time to the development and interests of the Pilcher Private Hospital which, in association with his father, he helped to found and to which institution he has since devoted so much of his thought and energy.

The character of the work that he has carried on in this hospital is a matter of common knowledge to all of us. It stands as a monument to the possibilities of practical coöperative effort in the interests of the individual patient. It has also been a living vigorous and highly successful protest against certain irregularities and injustices with which the surgical profession of this community had long been burdened and today we are thankful that the record and example of this little hospital have pointed the way to the possibilities of a new era and broader fields of usefulness. Through Paul Pilcher's efforts especially and the impetus which he gave to it, the undertaking had grown to such large and increasing proportions that frequent additions of space and assistants to carry it on became necessary.

His contributions to the best Surgical journals of the country were frequent and his writings always embodied original ideas and a message of progress and truth.

From 1907 to 1911 he was editor of the Long Island Medical Journal.

In 1911 he had published a large sized text book on Practical Cystoscopy, a pioneer work in this country on the Diagnosis of Surgical Diseases of the Kidney, Ureter and Bladder. This volume has been widely accepted as an authoritative guide and further editions have been called for.

Two years ago, after a visit to Copenhagen, under the editorship of Dr. Pilcher the Clinical Lectures of Rovsing on Abdominal Surgery were translated from the Danish and published in this country.

Ever a student, he was a regular and enthusiastic visitor at the clinics of other surgeons. Through these pilgrimages he became well acquainted with the leaders of surgical thought and practice throughout the world and by them he was held in high personal esteem. He always returned to Brooklyn with fresh thoughts and new ideas which he eagerly incorporated in his own work and gave freely to us.

A member and active participant in the affairs of practically all of our local, general and special societies, he was also prominent in the rolls of the larger State and National organizations. This year he had been appointed Chairman of the Section on Surgery of the State Medical Society and was applying himself to the task of arrangements with characteristic forethought and energy.

He was a member of the Executive Committee of the American Urological Association, and that privilege which he most coveted came to him a few months ago when he was elected to membership in that select body known as the American Surgical Society. This honor he received with his usual boyish enthusiasm and modesty.

Such, then, is the incomplete record of the professional life and attainments of our colleague and friend.

Those same qualities which made him preeminent in his work characterized him as a man in his other relations. In his home, more than husband and father, he was the comrade and thoughtful friend.

Conscience, loyalty, courage, a broad and tolerant point of view, unfailing courtesy, a high degree of culture and personal charm endeared him to many people in every walk and phase of life.

As the records of his professional achievements and his contributions to scientific progress have been indelibly inscribed on the pages of medical history, so the memory of him as a charming personality will live in the hearts of a loving family and devoted friends as a proud heritage, an inspiration and a stimulus to higher purpose and better things.

It has been well said that love conquers all things and so with our colleague, the love of life and work, the love of truth and justice, the love of family and friends made it possible for him to surmount many obstacles and attain those things which are most precious and without price.

To express the feelings of the members of this Society, as well as those of many other associates and friends, I can do no better, if I may be so privileged, than to repeat the words of his distinguished and devoted father as Paul Pilcher passed on from this life—"My boy, we loved you and we were very proud of you."

Surely such a life has not been lived in vain.

Obituaries

DEPARTMENT UNDER THE CHARGE OF WILLIAM SCHROEDER, M.D.

JOHN GEORGE JOHNSON, A.B., M.D.

Dr. Johnson was born October 10, 1833, at Andover Mass., and died in Brooklyn, N. Y., March 24, 1917.

He was educated at Harvard University where he received the degree of A.B. in 1854. His medical education was received at the College of Physicians and Surgeons, N. Y., graduating in the class of 1857. During his sixty years of professional life in Brooklyn he held the positions of Assistant Surgeon, Long Island College Hospital, in 1859-60; First Demonstrator of Anatomy, at the L. I. C. H., in 1860; surgeon to the Union Ferry Company, Brooklyn City Railroad, New York and Brooklyn Bridge, Prospect Park and Coney Island Railroad. He also served a term as interne at Bellevue Hospital in 1857. During the Civil War he was in charge of the hospitals at Sharpsburg. He was a member of the Medical Society, County of Kings, from 1861-1904, Brooklyn Pathological Society, and the Brooklyn Society for Neurology.

Dr. Johnson was twice married; his first wife was Elizabeth Carpenter Ludlow, who died in 1909. In 1913 he married Miss Emma Roe, who survives him.

Medical Papers.

For a time he was connected with the New York Medical Journal.

1857—Intra-capsular Fractures of the Cervix Femoris;
1881—Vaccination, Medico—Legally Considered;
1881—Anaesthetics, Medico—Legally Considered.

W. S., Sr.

PHILIP MILLS JONES, M.D.

Dr. Jones was born in Brooklyn, N. Y., January 17, 1870, and died at San Francisco, California, November 27, 1916. He was the son of Lysander Mills Jones and Pauline B. Hendricksen. He was educated at the Polytechnic Institute. His medical education was recevied at the Long Island College Hospital, receiving the degree of M.D., 1890. He practiced medicine in Brooklyn for a time; was a member of the Medical Society, County of Kings, 1891-92; in 1900 he engaged in archaelogical work for the University of California. In 1902 he became editor of the California State Journal of Medicine. He was a member of the National Committee on Public Health, American Academy of Medicine, Medical Society of the State of California, San Francisco County Medical Society.

W. S., Sr.

JOHN HALSEY BENJAMIN, M.D.

Dr. Benjamin was born at Riverhead, Long Island, June 22, 1855, he died November 26, 1916. He was the son of Caleb Halsey Benjamin and Hannah M. Young, both of New York.

He was educated at the Bridgehampton Literary Institute, his Medical education being under the direction of Edward G. Janeway, M.D., and was completed at the Bellevue Hospital Medical College, where he was graduated in 1876. This was followed as interne in the Nursery and Childs' Hospital. During his professional life at Riverhead he took an active part in the affairs of the town; he was a trustee of the Suffolk County Trust Company, a member of the Suffolk County Medical Society, of which he was president in 1902, a member of the Associated Physicians of Long Island from 1899-1916.

Dr. Benjamin was twice married. To Florence Williams in 1880 and Armida Wood in 1889. He was a member of the Congregational Church at Riverhead, where the funeral services were held.

W. S., Sr.

HARRIET DOUGLASS WHETTEN SHOWERS, M.D.

Dr. Showers was born in New York City, in 1869, and died at Kings Park, Long Island. November 29, 1916, she was the daughter of Dewitt Clinton Slater, and the widow of the late Rev. Aura Clare Showers.

Dr. Showers received her medical education at Cornell University, where she was graduated in the class of 1900. She was in practice for a few years in Brooklyn, and a member of the Medical Society, County of Kings, in 1901-02, physician at the Woman's College at Meridian, Conn., and for a time at the Trinity Hospital, East New York. She is survived by a son, DeWitt Clinton Showers.

W. S., Sr.

PAUL MONROE PILCHER, A.M., M.D., F.A.C.S.

Dr. Pilcher was born in Brooklyn, N. Y., April 11, 1876, where he died January 4, 1917. He was the son of Lewis Stephen Pilcher, M.D., LL.D., and Martha Phillips. His early education was received at the Polytechnic Institute and the University of Michigan, where he received the degree of B.S. in 1898, the degree of A.M. being conferred upon him by Columbia University in 1900. His medical education was at the University of Michigan and the College of Physicians and Surgeons, N. Y., where he received the degree of M.D. in 1900. This was followed as interne in the M. E. Hospital from July, 1900, to January, 1902, after which, a year of post-graduate work at the University of Gőttingen prepared him for his life work.

During his professional life he held the position of Surgeon to the M. E. Hospital, German, Samaritan, Williamsburgh and St. John's, cystoscopist to the Jewish Hospital and Consulting Surgeon to the Eastern L. I. Hospital. He was a member of the Medical Society, County of Kings, from 1903-17, The Associated Physicians of Long Island 1903-17, Brooklyn Medical Society 1907-17, American Medical Association, American Surgical Society, American Urological Society, Brooklyn Pathological Society, of which he was President in 1912, M. E. Hospital Alumni Association President in 1910.

Dr. Pilcher was married in April 1905, to Miss Mary Finlay, who, with two sons, Lewis S. Pilcher, and Paul M. Pilcher, survive him.

CONTRIBUTIONS TO MEDICAL LITERATURE.

1907-12, Editor Long Island Medical Journal. Practical Cystoscopy. 8 vols. Pp. 398. 1911. 2d Edition. 8 vols. Pp. 504. 1915.
1907—Pathology, Etiology and Management of Obstructive Hypertrophy and Atrophy of the Prostate;
1907—X-ray Treatment of Tubercular Lesions with Report of Cases;
1908—Use of the Cystoscope as an Aid to Diagnosis in Diseases of the Bladder and Kidneys;
1909—Tuberculosis of the Kidney and Bladder;
1909—Ryelitis of Pregnancy.
1909—Renal Varix;
1909—Surgical Treatment of Lesions Due to Arterio Sclerosis;
1910—Hemorrhage from the Kidney;
1911—Surgical Indications of Duodenal Ulcer;
1916—Some Phases of Calculous Disease of the Kidney and Ureter.
1917—Pain Due to Anatomical Deviation of the Ureter.
Abdominal Surgery, by T. Roosing.
Edited by Paul M. Pilcher, M.D. 8 vols. Pp. 477. 1916.
1915—Pathology and Etiology of Obstructive Hypertrophy of the Prostate Body;
1913—Exactness in Diagnosis and Conservation in Treatment of Renal Calculus.
1912—Tumors of the Bladder and Treatment;
1914.—Transvesical Prostatectomy in Two Stages;
1909—Postural Treatment on Lavage of the Renal Pelvis for the Relief of Ryelitis of Pregnancy;
1911—Radical Cure of Femoral Hernia in the Aged;
1912—Renal Tuberculosis and Treatment;
1912—Carcinoma of the Bladder and Ureter;
1912—Operations for Prostatic Dysuria;
1912—Suprapubic Operation for Prostatectomy;
1914—Chronic Gastro-intestinal Lesions.

W. S., SR.

ROBERT HENRY HERKIMER, M.D.

Dr. Herkimer was born in Brooklyn, N. Y., February 17, 1870, where he died January 16, 1917. He was the son of Seneca and Eliza Herkimer, both of New York.

He was educated at the Public and High Schools. His medical education was received at the College of Physicians and Surgeons, and the Long Island College Hospital, where he received his degree of M.D. in 1892. At times he was surgeon to the E. D. Hospital and Columbia Dispensary.

Dr. Herkimer was married on January 16, 1893, to Ella V. C. Smith, who with a daughter, Olivia V., survives him.

He was a member of the Medical Society, County of Kings, from 1900-10, Joppa Lodge, No. 201, F. & A. M., Constellation Chapter, No. 200, R. A. M., Clinton Commandery, No. 14, K. T., and Kismet Temple, A. A. O. N. M. S.

W. S., SR.

GEORGE HENSON DAVIS, M.D.

Dr. Davis was born in Brooklyn, N. Y., August 22, 1873, where he died on January 28, 1917. He was the son of George P. Davis and Mary I. Henson.

He was educated in the public schools and his medical education was under the direction of S. D. Boggs, M.D., and the Long Island College Hospital, where he was graduated in 1895. This was followed as interne at the E. D. Hospital. During his professional life he was physician of the Central Throat Hospital, a member of the Brooklyn Medical Society and the Associated Physicians of Long Island from 1900-17. He is survived by his widow, Oriel Gulli Davis.

Dr. Davis was surgeon with the rank of Captain in the N. G., N. Y., a member of Authon Lodge, No. 769, F. & A. M., Evening Star Chapter, No. 225, R. A. M., and Long Island Grotto, No. 44.

W. S., Sr.

ARTHUR ELMORE SMYLE, M.D.

Dr. Smyle was born in Brooklyn, N. Y., March 4, 1862, where he died February 5, 1917. His medical education was received at the College of Physicians and Surgeons, N. Y., where he was graduated in 1883. He was for a number of years physician to the E. D. Hospital, a member of the Medical Society, County of Kings, 1891-96, and the Associated Physicians of Long Island from 1911-17; also a member of Marsh Lodge, No. 188, F. & A. M., and the Empire State Society of the Sons of the American Revolution.

Dr. Smyle is survived by his widow, Ada, a son, Alophe E., and two daughters, Mrs. H. G. Werner and Miss Ruth Smyle.

W. S., Sr.

WASHINGTON JONES BRANDT, M.D.

Dr. Brandt was born in Brooklyn, N. Y., in 1860, where he died February 14, 1917. He was the son of Daniel R. Brandt and Mary Jones. He was educated in the Public Schools of this City, and was graduated from the College of Physicians and Surgeons of N. Y. in 1880. A member of the Medical Society, County of Kings, from 1882-1897. He is survived by his wife, Celene Fougera Brandt, and two sons and a daughter, Edmund O., Daniel R., and Gabrielle Brandt.

W. S., Sr.

LEWIS G. LANGSTAFF, M.D.

Dr. Langstaff was born in Canada, where he died March 17, 1917. He was educated at the Toronto University. His medical education was received at Victoria University, where he received his degree of M.D. in 1884. For a number of years he was in practice in Brooklyn, N. Y., a member of the Medical Society, County of Kings, from 1896-1908, the Associated Physicians of Long Island, 1905-14, American Medical Association, Canadian Club of New York, and during the Spanish American War a member of Troop C of Brooklyn. He was married to Josephine Chadwick of Bath, England, who with an infant daughter survives him.

W. S., Sr.

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

APRIL, 1917

MEDICAL SOCIETY OF THE COUNTY OF KINGS STATED MEETING, APRIL 17, 1917.

The President, Dr. Albert M. Judd, in the chair. There were about 425 present. The meeting was called to order at 8:40 p. m., and the minutes of the previous meeting were read and approved.

Report of Council.

The Council reported favorably upon the following applications for membership:

Stanislaw J. Aklier, 301 Broadway; Univ. Vt., 1890; Mar. '17.

Hyman S. Emil, 152 Bay 16th St.; Med.-Chir., 1916; proposed by W. L. Wolfson; seconded by L. S. Schwartz, Mar. '17.

John N. Evans, 909 Bedford Ave.; L. I. C. H., 1916; proposed by W. A. Jewett; seconded by G. H. Reichers; Dec. '16.

Bennett G. Gerzog, 481 Stone Ave.; L. I. C. H., 1907; proposed by L. S. Schwartz; seconded by I. D. Kruskal; Dec. '16.

For Corresponding Membership.

Henry A. Geib, Woodhaven, N. Y.; Univ. & Bell., 1914; Proposed by Membership Committee; Mar. '17.

Election of Members.

The following duly proposed and accepted by the Council, were elected to active membership:

Charles Bromberg, 187 Hooper St.; L. I. C. H., 1905; proposed by R. S. Fowler; seconded by Membership Committee; Jan. '17.

Vito Caronna, 31 Jefferson St.; Univ. Naples, 1907; proposed by P. Virdone; seconded by R. S. Fowler; Feb. '17.

Leo Faske, 1515 Eastern Parkway; L. I. C. H., 1912; proposed by C. Goldman; seconded by L. Fisher; Mar. '15.

Paul C. Fleri, 264 Union St.; Albany Med. Coll., 1913; proposed by G. De Yoanna; seconded by A. De Yoanna; Feb. '17.

Henry J. Goubeaud, 518 Carlton Ave.; L. I. C. H., 1890; proposed by A. M. Judd; seconded by Membership Committee; Feb. '17.

Mattio Siragusa, 208 Melrose St.; Univ. Palermo, 1905; proposed by P. Virdone; seconded by R. S. Fowler; Feb. '17.

Applications for Membership.

Applications for membership were received from the following:

Walter A. Coakley 500 Clinton St.; Fordham. 1916; proposed by A. M. Judd; seconded by E. H. Fiske; Mar. '17.

Frederick Gauch, 12 Hawthorne St.; L. I. C. H., 1911; proposed by A. Potter; seconded by A. M. Judd; April '17.

David D. Jennings, 406 Ovington Ave.; N. Y. Univ., 1886; proposed by J. C. Hancock; seconded by Membership Committee; Mar. '17.

Chas. J. Lundbeck, 107 Bergen St.; Eclectic, N. Y., 1883; proposed by A. M. Judd; seconded by Membership Committee; April '17.

Raffaele Muojo, 242 Tillary St.; Univ. Naples, 1896; proposed by R. S. Westbrook; seconded by S. J. McNamara; Mar. '17.

Fedor L. Senger, 9214 Glenwood Road; L. I. C. H., 1912; proposed by J. S. Read; seconded by Membership Committee; April, '17.

For Reinstatement.

Reuben Finkelstein, 257 Utica Ave; L. I. C. H., 1906; proposed by A. M. Judd; seconded by Membership Committee; Mar. 17.

Scientific Session.

Paper: "The Diagnosis, Prognosis and Treatment of Nephritis."

By Richard C. Cabot, M.D.
of Boston, Mass.

Dr. Cruikshank made a motion that a rising vote of thanks be extended to Dr. Cabot. This motion was seconded and unanimously carried.

Dr. Russell S. Fowler, Chairman of the committee on the investigation of the methods of protecting physicians practice who enter the United States service during the present war gave the following report:

Report of the Committee on Devising Methods for Caring for the Work of the Medical Men called to the Colors.

The personnel of this committee consists of the following:

J. W. Fleming.
Jacob Fuhs.
Henry H. Morton.
J. Scott Wood.

Robert L. Moorhead.
F. B. Cross, Treasurer.
Purdy H. Sturges.
O. P. Humpstone.
Warren L. Duffield, Secretary.
Russell S. Fowler, Chairman.

The committee was appointed April 9th and meeting of organization was held April 11th. It is the opinion of the committee that its scope should be extended to cooperate with the other County Societies of Long Island. Letters have been sent to physicians in Canada and various parts of the British possessions asking for such data as may be available as to steps taken by medical men in those communities to conserve the financial interests of physicians who have been called to the colors. The time is too short as yet for answers to have been received.

The plans so far which our committee have in mind are as follows:

1. A fund furnished by the committee for financing the expenses of the committee.
2. The indexing of possible beneficiaries of the committee together with data as to their service, hospital affiliations, practice, age and details as to the arrangements for the care of their practice while they are away.
3. The collection of an emergency fund from medical men and from the public, such fund not to be used for committee expenses.
4. Cooperation with similar committees in other counties or ask the other county societies to name delegates to serve with this committee.
5. The offering of the services of the committee for the arrangements of details in regard to the care of the practice and other matters of men called to the colors.
6. Letters of physicians on Long Island explaining the purposes of the committee, the committee's desire to aid, and asking the cooperation of medical men in general.
7. The committee desires authority from the County Society to be continued as an active committee with power to carry out the above aims and such others as may seem best under circumstances.

Respectfully submitted.
Russell S. Fowler,
Chairman.

This report was received and adopted.

Dr. J. R. Kevin presented report from the Charter Revision Committee stating the progress of the Brooklyn Health Commission Bill in both the Senate and Assembly. He further urged the cooperation of each individual member in gaining the support of his Senator or Assemblyman for the passage of this bill.

Meeting adjourned at 11 p. m.

Lewis P. Addoms, M. D.,
Associate Secretary.

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RECENT FORMULATIONS OF THE PROBLEM OF EPILEPSY AND ITS TREATMENT.

L. Pierce Clark, M.D.,

New York City.

IN view of the fact that the older conception of the pathology of essential or idiopathic epilepsy yielded so little of practical value to neurologists, either in the management of epileptics or the treatment of the disorder itself, a group of workers in this special field undertook some three or four years ago to study the essential constitutional makeup of such individuals before their epilepsy had become pronounced in fits. For years it has been recognized that the mental stigma of the disorder when once well established carries with it a distinct mental type. This temperamental peculiarity was thought to be due to the epileptic convulsions *per se,* but on closer inquiry the fundamental instincts of this temperament could be detected long before the fits became obvious. In point of fact, in the careful study of a large material the beginning characteristics of the mental stigma of this disorder were found to be *inborn.* The defects of instincts in the classic cases were those of egocentricity, supersentiveness, a lability in mood toward all sorts of life stresses, and especially toward those which impinged or thwarted the egotistic desires of such individuals as children. As a consequence of the defective interaction of such instincts upon an unsatisfying and unyielding environment, many of these difficult children had frequent conflicts with authority, at home, in the school, and with society at large. The residual of these mental conflicts was shown in rages, tantrums, lethargies, day dreams, and like reactions. As such children grew older, their conduct disorders usually became more marked. In the most illy adapted of these children the increasing demands of the development epochs—weaning, the mental and motor coordinations of talking and walking, the tasks at entrance to school, the gaining of a biologic independence at puberty, the undertaking of the life work or the stress of a later period when adult life was undertaken in marriage or the rearing of a family—all these periods of special demands seemed to cause these individuals to feel undue emotional stress, and they frequently broke down in pronounced epileptic reactions of a seizure character.

A prolonged and careful study of many cases revealed a mechanism for the epileptic attacks somewhat as follows:

There would be a history of a steadily increasing keying-up of the nervous tension in the predisposed epileptic individual, and when the fatigue and irritation seemed beyond further endurance, a loss of consciousness with or without a convulsion would follow.

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*Read before the Brooklyn Neurological Society, Apr. 11, 1917.

Of course it is not possible to recover any memory content from an epileptic during or following his severe attacks, but in the milder epileptic reactions it is often possible to connect with the attack the particular type of stress he has been experiencing either at the time of the petit mal or immediately before. A number of such instances carefully studied will soon be reported showing that the irritative stress acted as a provoking agent in exploding the fit gun, as it were.

A number of us have undertaken to map out the mental factors which seemed to be the precipitating causes of epileptic reactions. We have discovered that while the mental factors thus irritating the epileptic individual are legion, yet they can be fairly well grouped and occur in this order:

A certain preponderance for epileptic reactions is usually shown in the epileptic's diminished spontaneous interests; he feels lethargic and irritable; he has to be directed at his work or specially entertained and as time advances he shows lethargies, day dreams, pronounced temper disorders of rages or anger, and then, if the stress continues, he either has mild attacks or he may have one or more severe convulsions. Following such attacks, after the physical and nervous fatigue are recovered from, he resumes his usual quiet and calm interparoxysmal state, and in a more or less definite period of time he repeats the cycle.

In brief, we may formulate the matter as follows:

In essential epilepsy we usually have a well defined particular makeup of an individual upon whom in later life a specially upsetting stress is thrown; he then reacts away from this demand of adaptation to life in a loss of consciousness; the milder or severe type of the epileptic reaction being greatly proportionate to the degree of individual defect of instincts and the amount of extra stress superimposed. I may say at the outset that the individual defect in makeup may be so gross as to be easily detected by the most casual observer, or it may only be disclosed by painstaking inquiry or careful unbiased observation. There are infinite varieties of the one type of mental stress and the fit reaction, but the characteristics of this type are fairly constant if carefully looked for. This statement is not new, but has been investigated anew and placed more prominently to the force. Again, the types of stress may not always be solely of a mental character. The lowered general physical vitality of the epileptic is proverbial. His vasomotor and digestive disorders are equally well known, but I submit, as physicians we have placed too much dependence upon these physical factors alone in the past, and have not taken a broad enough view of the primary defective constitutional endowment of the epileptic nor the special environmental stresses that so frequently play the very important role in continuing his epileptic disorder. If it be true, then, as seems to be the case, that in essential epilepsy we have a peculiar egocentric, supersensitive type of individual who makes poor adaptations to the ordinary stress and demands of life and that when the latter are peculiarly difficult he reacts away from such stresses in fits, what should be the plan of care and treatment to remove his disorder or ameliorate his unfortunate state? In answer to this we may now take up the therapeutic suggestions drawn from prolonged clinical study of the foregoing data and facts.

It is interesting to note that the modern therapy of epilepsy has many heritages from the past. Two rather recent therapeutic experiments have contributed the greater part of our present day attempts at the treatment of the disorder. The first had its advent with Laycock's introduction (1851) of the bromides as the ideal sedative treatment for epilepsy. I venture to say this therapy, while having important and distinctive advantages, has done more to obscure the nature and pathology of the disorder than any other factor of recent appearance. For more than half a century at least, the sedative treatment of epilepsy with bromides has prevailed, and despite every encouragement to look upon epileptic therapy in a more rational light, the bromides still usurp first place in any general plan of treatment.

An historical resumé of the evil effects of bromide sedation would cast shame on medical thought and practice of this period. During the past two decades, however, a more rational therapeutic theory has been making slow progress against the sedative conception of treatment. This physical therapy, of hydrotherapy, diet, cleansing enemas, and a detailed plan of work and exercise, is the principle of the latter advance.

Still more recently we see a generally recognized effort to introduce a rational psychologic therapy for epilepsy. One may say that this is really not new, and is in accord with the modern conception of mental hygiene and the more precise interpretation of the nature and treatment of the psychoneuroses and psychoses. It is simply a careful effort to understand the makeup of the individual epileptic and the mental mechanism of his disorder, and to apply broad yet specific principles of treatment. In making a special plea for this type of therapeutic approach, the fact is not lost sight of that sedatives and physical therapy, particularly the latter, are not without value. We wish merely to insist on the limitations of this kind of therapeutic theory. The enlarged view will be more rational and also more humane, yielding not a little of value in the way of a broader psychologic and sociologic conception of this disorder. It must also contribute its share of enlightenment on many a similar problem in adjacent fields of mental therapeutics.

Undoubtedly the treatment of the primary and fundamental makeup of the epileptic must be our main concern as it is a defect which antedates the seizure phenomena for years. Next in importance for treatment are the epileptic reactions shown in behavior and conduct disorders, which when carefully looked for, can almost always be found in a case of the essential disease. These latter symptoms are of daily occurrence in the potential epileptic and often give the physician and relatives most concern even after a frankly convulsive epilepsy has become firmly and enduringly established. Finally, as has been shown in my own studies and those of other investigators, the seizures themselves often follow episodes of stress and disappointment which seem to precipitate the attacks. These need to be given more attention in future comprehensive plans of treatment. A certain degree of mental deterioration in the frank epileptic is a natural corollary or sequence of the epileptic character when care is not exercised to correct this tendency, and my own cast studies abundantly illustrate this point. It would seem, indeed, that the diagnosis, treatment, and prognosis of idiopathic epilepsy can be properly made in future only by taking into strict account the degree and kind of primary character endowment of the epileptic, and its modifiability under a system of training, together with an analysis of the seizure phenomena. Though this statement makes the seizure phenomena distinctly of secondary moment, a similar view has been more or less tacitly assumed by good clinicians of the past. To establish proper principles for the treatment of epilepsy, epileptologists must cease to give their attentions entirely to the occurrence of individual attacks and their treatment as such. When this is done, and only then, shall we be in a position to make a just estimate of the extent and character of the disease and formulate a comprehensive plan of treatment. As a pure drug therapy for epilepsy already savors of quackery, so should a purely physical therapy grow more and more to be regarded in the same light.

The usual makeup of the potentially epileptic child is one of egocentricity, emotional poverty, morbid sensitiveness, and an instinctive inability to take on the adaptive social training as does the normal child in the home and school. A morbid exhibition of this latter defect is shown in the display of rages and tantrums. Such children should have special training from earliest infancy, and particularly by someone specially gifted for the task. Often this is best done by someone other than the parents. So soon as the keen individualism of these children comes into contact with an exacting or unyielding environment, it is expressed in rages and tantrums. Great tact is necessary to size up the factors of each tantrum episode and judge how they may be properly handled. At one time the child may be sidetracked by directing his interest into another channel; at another he may be completely ignored throughout the entire tantrum, especially if the child be too observant of the effect his conduct has on the family. One should be sure not to offer bribes or rewards for a restoration of proper conduct. Often such concessions are the irreparable beginnings of a downfall of government and discipline. If the child is to be diverted to some other interest, this should always be supplied early and before any severe repressive measure is brought to bear. In these exhibitions of a balked desire, one should look upon the child's psychic activity as a continuously outflowing stream of interest unfortunately thwarted, which should not be blocked any more than an active mountain stream. One should always be sure to have the alternative at hand before the main issue is repressed to the slightest degree. In the most difficult children it is best to teach the child to place his own inhibition on his bad conduct and direct his attention to the new object without coercion or too much outward persuasion. No tantrum episode should be allowed to pass without a friendly and sympathetic review of all the circumstances which led up to the disorder. Tireless and tactful restatement is necessary of the great *personal* loss the child himself has suffered in consequence. To be fully effective, every opportunity for right conduct at the tantrum periods must be fully coupled up with the actual personal disadvantage the child suffers from his acts. The issues in question must be plain and simple, comparable with the degree of mental development to which the child has attained. The explanatory period is often at hand long before one ordinarily thinks it is possible. For instance, several children whom I have known have been given these simple talks in their third year, with much success. The plea of personal motive to right conduct in such children may be ultimately fortified by altruistic and social advantages, but these should never form the central core or main issue of training against tantrum episodes in their early manifestations. The absence of altruistic instincts, or their very rudimentary character in these children, is quite characteristic of the type.

As regards the everyday or general behavior of these children, a stiffening of the will or a broadening of emotional inhibition should not be undertaken too early or too intensively. Such children are usually inordinately slow in making simple or mildly difficult adaptations, and in consequence fatigue unbelievably soon. I know a child who at 6 years of age cannot bear even the slightest coercive direction for more than an hour or two without taking complete rest and frequent day naps. Children of this type do not always show their exhaustion in simple ways; they often look pale and haggard, pupils are dilated, or they grow lethargic, sit and day dream or slowly mount on a thin crest of hilarity easily broken by "squalls" of apparently meaningless crying; or they may make rigid demands of deportment on the part of their playmates. The trained observer gets to know these varied signs of fatigue and is often able to lower their nervous tension tactfully by quieter play. Under one pretext or another these children may be persuaded to seek rest of their own accord, after the higher level of their activity has been gradually lowered. A tantrum is not far distant in the bored or tired egoistic child, and running counter to his playmates is one of the commonest means which he takes to break the intolerable situation.

However, one usually feels that to give so much attention to the crises of personal conflict which the epileptic child manifests, is again to really miss the main point of the training treatment. The fault is quite comparable in a way with the obsessive attention physicians, nurses and relatives commonly give to the epileptic fit in the frankly established disorder itself. Long before the child displays tantrums, one finds much slighter but equally obtrusive manifestations of maladaption to the simple processes of life. Often these children must be slowly and carefully inured to the unpleasant demands of hunger and fatigue, a failure of which is frequently expressed in the restless crying baby. One must more slowly accustom such children to the hampering and unpleasant contact of the clothing, which often forces them into stereotyped positions. The desire for riddance of clothing is so much a part of the instinctive life of the epileptic child that many seizures of the milder sort occurring in the later life of such individuals are attended by automatic movements of disrobing, which acts are often performed in a childlike manner. The potentially epileptic child should have less insistent demands placed upon him, and for shorter periods of time than other children. His preference for certain types of dress should also be taken into account and yielded to so far as practicable. An equally wise attitude may be assumed toward the bath and diet. If left somewhat to self selection and direction in many of these matters, such difficult children much more readily and safely mend their ways. The same principle also applies to the type and character of play. The lesson derived from other children doing the conventional thing, most tactfully supplies a corrective influence which a parent or nurse may not exert. Frequently an incentive to reasonable conduct once planted by the right kind of associates bears more fruitful results than many and oft-repeated injunctions from the child's elders. A similar principle for handling the more benign types of conduct disorders in the normal child has long been recognized and practiced with advantage.

One may safely say that the method by which the child secures its first adaptations to hunger and fatigue, and to social adjustments of work or play with its fellows, should be a guide for the proper after-training of the potentially epileptic child. Sufficient data are now at hand to indicate that this primary endowment of makeup is probably always hereditary in the potential epileptic, and it often rests with us whether we shall allow it to develop to its logical conclusion in an outspoken epilepsy or by our attitude and manner of handling it prevent such development. A complete change of the makeup is probably beyond our power, but the modification of it should be our main concern in the future, if we wish to conserve such children from following an epileptic career in later life.

One may think that the infantile and child life are without stress and conflicts. However, one need but to remember, what Preyer has shown, that the unpleasant feelings are greatly in the ascendency all during the childhood period. Even with the most careful nursing, diet, ventilation, and regulation of temperature of the air and bath, under the most favorable surroundings, it is not granted the average child to pass many days without suffering. How much more painful then, must these discomforts be to such a supersensitive child as we are considering. Granting the above, what may one propose on the dynamic or positive side in the proper adaptation of the epileptic child? For this task one needs to study the child with greatest care. If the parents are incapable of a sympathetic understanding of what the child is striving for and his main trends of interest, then the work must be entrusted to others possessing this gift. A system of ethics can easily be built up around almost any line of activity the child may select. One may note its presence in all races, even in those whose life activities are most antipodal to our own. It is the attitude of approach toward one's specific surroundings that matters,—not necessarily the things themselves. If our type of child chooses either a practical or an imaginative approach, then he should be encouraged to find a proper healthful adjustment to that kind of life. The incessant clamoring of the child for variety and novelty of interests is but the natural demand that is his birthright—to see as many of the different facets of life as possible. Our concern is not to limit these novelties, but to see that the child shall have a thoroughness in experiencing them. The very completeness with which the difficult child may be made to do this is the safest protection against day dreams, lethargies and like abreactions from his work and play leading to boredom and irritability,—the forerunners of rages and tantrums. To establish at the earliest possible moment a self-directive government in the potential epileptic child should be our aim. The end sought is really to have him learn to penalize himself and adjust his own capabilities and desires to reality. Frequent psychotherapeutic talks relative to his difficulties are of greatest moment, and these can be undertaken only by someone in full sympathy and confidence with such a child.

In brief, then, the foregoing embraces the main outlines of some of the more important suggestions for the proper mental therapy of the potentially epileptic child in the home before the school age is reached. The proper inculcation of a good system of nursery ethics is by far the most important object in training such children.

While the scholastic training for all children must rest somewhat upon the same common grounds, the goal to be won for the education of the epileptic youth must be arranged to suit his peculiar makeup. The methods of attaining it are quite distinct and special. For instance, where there is an intellectual defect coincident with an epileptic makeup the problem is to educate this type of individual somewhat as if he were feebleminded. Even if this is done, sooner or later there will be a distinct outcropping of the peculiar epileptic instincts that would demand a considerable modification of the school system; but while this class forms a larger part of institutional charges, numerically it is not so important in the general run of epileptic children. The former may show further handicaps of mental arrest or even mental deterioration forcing one to modify the school training very considerably. Often the purely intellectual training has to be entirely omitted and the whole time given over to tutoring the epileptic youth in social behavior. In other words, the school training for epileptics should be intensively individualistic and constantly elastic. The very monotony which the feebleminded enjoy in any scholastic training, is poisonous to the soul of the epileptic. The latter requires novelty and a wide range of educational appeal. Moreover, in a large number of epileptic youths the intellect, as such, suffers but little or no impairment, and the educational training which these individuals need is little different from that which is ordinarily given to normals, except that it includes adjustment to work and adaptations along ethical, moral and social lines.

On the whole one may say it is a great mistake to approach the problem of educational training for the epileptic, in its broadest sense, on the old ground that he is only a little less retarded than the feebleminded, because in reality his primary fault is his egoistic trend and an emotional poverty. These abnormalities affect his environmental rapport and often he suffers from a lack of intellectual stimulus because of a weakened attachment to reality. Simply because he is mentally retarded is no reason for his education being placed on the plane of that for the feebleminded. The same might be said of the deteriorated dementia praecox patients whose psychometric test brings them within the middle range of the feebleminded. If the schooling is like that for the feebleminded it should be possible to modify its routine so as to make it adjustable to the demands of the epileptic character. The retarded epileptic has such an irregular mental age level at best that he is not often capable of doing well in any large class teaching as does the feebleminded.

The differences between the feebleminded and the epileptic are by no means essentially purely academic. They are sufficiently common and far reaching to compel the attention of educators, and they should be particularly recognized by those who plan to place the two classes together in one institution. Should this plan be adopted to any large extent in this country, the innate differences in makeup and mentality of the two classes should be recognized and proper classification made in the schools. The laisser faire attitude of slightly modifying a feebleminded school to fit the epileptic should not be allowed to prevail.

It is easy enough to see that epileptic youths who have very frequent attacks can make little use of any system of regular intellectual training because of the nature of their attacks and the amount of acute mental disturbance entailed. The attacks prevent a consecutive attendance at school, hence much of the education is rendered useless on account of the break in its continuity.

We find a system of educational training of most value in epileptic youths who have infrequent attacks, and have a fair intellectual endowment as well as ability to generate directed, and finally spontaneous, interests. Primarily the colonization of epileptics means most to these individuals. It supplies a continually interesting and varied environment with all the possibilities of modification from season to season, so that monotony and boredom can be avoided.

After the above rather negative views as to why the epileptic should not be given the treatment of the feebleminded type, let us consider the positive, dynamic aspect of the proper treatment.

The system of education in the schoolroom must be an essential and integral part of the occupational life of the epileptic, whether he recovers from his epilepsy or not. What he needs is to have his educational training coupled up with the occupations in which he is engaged and which he cares about. For instance, those who are interested in agriculture should have a system of book instruction and class work that will make for a further elaboration and understanding of all the daily duties grouped around this particular type of interest. It is obvious that the maximum of school training shall be concrete rather than of an abstract nature, and along the lines in which the patient exhibits the keenest interest and most distinct capabilities. Abundant illustrations show that the type and manner of school training should be properly adapted to the peculiar makeup of the individual child.

The greater part of what has already been said applies to the training of those children who may also show frank epileptic seizures during early childhood. The actual protection of the mental and physical integrity of the frankly epileptic child becomes doubly necessary when attacks have once commenced. First of all the child usually needs to be withdrawn from the average school which often furnishes the stress that is too much for him. A period of care-free existence should then be maintained sufficiently long for the little patient to recover his mental balance and the proper regulation of physical health. The pallor, nervousness, disturbed sleep and like symptoms are usually removed quickly under such a let-alone treatment. At this stage the real trial begins, because from this point on we must have two motives in operation in handling the patient: first to remove all the too stressful situations which the patient has reacted away from in the attacks; and secondly, to begin a careful system of training in slowly accustoming the patient to types of stress which he must get used to if he is to make a proper adaptation in life when he has recovered from his more gross epileptic manifestations. The reconciliation of these two motives in a training treatment calls for the greatest discernment and tact. Often this can be initiated only away from home—especially away from either a too harsh and sympathetic discipline, or a too inconstant and over indulgent one. I have succeeded fairly well, however, in training the least neurotic of the two parents in many instances to undertake the proper training treatment for their epileptic child. But the personal sacrifice entailed is very great, even though the training treatment progresses satisfactorily.

There is a parallel in the training treatment of the frankly established epileptic and that of the epileptic child before the disease has become established. With the former, however, efforts must be redoubled and placed on a more adult plane. One should not rest content with the removal of stress from the life of the epileptic youth, for this is only a preliminary treatment. If this let-alone principle only is followed, the situation which will soon develop will be but little less intolerable for all concerned than the original condition. If left to himself, the frank epileptic soon occupies himself with day-dreaming, lethargies, and all sorts of idle dissipations, which in their turn often beget more epileptic reactions.

One should study how best one may help the epileptic individual to objectivate his interest in work, study and play, in accordance with his ability. To carry this into effect, the closest scrutiny of his emotional and intellectual interests is necessary. His environment, which in most instances may have been reduced in social demands, ought still to offer sufficiently varied outlets from which he must choose a number of interests and amusements. Probably no greater mistake is made than to tell epileptic individuals to betake themselves to the country and then allow the matter to end there. Many epileptics almost at once have an increased number of attacks and, what is still worse, begin to deteriorate mentally and emotionally through lack of proper stimulus. There must be a certain novelty in the occupations and amusements, and not a few to select from; hence the importance of epileptics being in a country environment not too dissimilar to that to which they have been accustomed,—only the tempo, as it were, is to be reduced. Some of the large public colonies for epileptics are richly supplied with such potential advantages but unfortuntely for economic reasons alone a number of highly trained and gifted attendants and physicians are not at hand to assist these more sluggish epileptics to get the proper start in congenial work. Lacking personal direction and attention, many an epileptic manufactures his own interests only after a long time, or not at all.

All frankly pronounced epileptics are doubly handicapped by their natural antisocial tendencies as well as by the epileptic seizures themselves. Such a temperament is a direct hindrance to the epileptic taking up a healthy interest in any life offered him. In the absence of a spontaneous interest, the remnants of former ones must be pieced together or new ones induced. This can be effected only by actually living in close contact with the daily lives of the patients, assisting and encouraging them to start the cold and uninviting task anew each day. Often before work and study can actually be put into operation the epileptic individual must be given many kindly explanatory talks concerning the treatment, the common-sense view taken of his disorder, and the method planned for its riddance. These talks have to be endlessly varied, and simplified to the individual's understanding. The friendly association which many another neurotic or psychotic may have with the nurse and physician plays but little part in dealing with epileptics. The very nature of their makeup precludes this, and the treatment is, therefore, at times most disheartening. Of course the unlikability of such epileptic individuals, and the physician's and nurse's failure to transfer their own deep interest to them, is proverbial. Still the task must be done in spite of the mutual unstable and weakened trend of sympathetic interest. Until a satisfactory talk makes the problem clear to the patient, little can be done. Even when the new regime is fully inaugurated it may fail in a single day and the whole process of confidence and assurance must be reinvoked the next. A few gifted individuals may succeed in the role just detailed, but may fail in the next step of putting the theory into practice. The general dislike of the epileptic to perform sustained labor day by day, is well known, and the faithful attendant must himself participate in the activities outlined and in most instances must take the lead until such time as it can be borne without direction and guidance.

Probably the motive back of the advice given in foreign text-books, that the epileptic should live in a country clergyman's family, is to gain for such invalids the varied and sustained cooperative interest of the family. Unfortunately in this country either the clergy are not inclined to undertake such work, or they are too ill equipped by nature to cope with such a delicate humanitarian problem. What is even more unfortunate, our country practitioners are often but little better qualified to understand the far-reaching importance of taking epileptic individuals under their personal supervision. To be sure, it implies an intense preoccupation in the minutiae of the lives of such persons, but the issues cannot otherwise be met if the profession is to assume the obligations. Perhaps a broader understanding of the purpose of modern mental hygiene will remedy this lack in the future. If so, it will be to the lasting advantage of epileptics as well as many another mental invalid.

Just as we made note of the inadequacy of considering only the tantrum of the potentially epileptic child, neglecting the whole issue of understanding and correcting the lives of such children, so we may reiterate here the uselessness of exclusive concern in the epileptic's life at the time of or shortly before his attacks. To do so is to fail in a considerable number of instances, to lose a proper evaluation of the mental precipitating factors of fits, as well as to lose sight of the broader principles concerned in the proper mental treatment of the individual case. The immediate factors often found to make for attacks I have illustrated by charts. These chartings are often of the utmost practical moment in shaping a training treatment. By avoiding these stressful factors and substituting other lines of activity and interests, one may introduce an effective mental therapy in many cases. There is rarely a case in which intelligent care in this direction may not signally aid one in formulating a progressive treatment.

Conclusion: One may summarize the results of this clinical study of essential epilepsy as follows:

(1) There exists a more or less definite type of constitutional makeup in epileptics which has long been recognized by many able neurologists and psychiatrists, and this defect accounts in no small part for the so-called "predisposition" to the disease—a term in common use to-day. The essential defects of instincts are egocentricity, supersentiveness, an emotional poverty, and an inherent defect of adaptability to normal social life in its broadest significance. The main defect is an inheritable one. This makeup is the primary or original mental endowment of the potentially epileptic individual It is accentuated and made the more obvious by the further advance of the disease only when seizures develop. It is then often spoken of as the "mental stigma" of the disease. The attacks are not solely responsible for epileptic deterioration, but the seizures are themselves symptoms and exhibitions of the deteriorating disorders. The seizures do not always indicate the progress and degree of deterioration in any given case; *i. e.,* the number and severity of fits in a given case may not be an index to the amount of deterioration, nor may one postulate the severity of seizure reaction in a particular case by the type of deterioration.

(2) The precipitating mental factors that often seem to bring about epileptic reactions in a potential epileptic, which range all the way from simple disorders of conduct to definite seizures, are types of stress and annoyance, causing a loss of spontaneous interest, and an intensive regression to day-dreaming, lethargies and somnolence. The attack occurs at the final break of a too severe tension, and

psychologically may be viewed as an intense reaction away from the intolerable irritation, a regression to a primitive mentality comparable to that of infancy or intra-uterine life.

(3) The therapeutic suggestions for a mental therapy in essential epilepsy would be to overcome, by proper training and education, the earliest beginnings of epileptic reactions in childhood. More particularly should the training concern itself with the eradication, as far as possible, of the defective instincts shown in egocentricity, supersensitiveness and rigidity of adaptation to the home and community. This is best brought about by (*a*) reducing and limiting the undue stress of the environment; by (*b*) steadily teaching the child adaptation to various types of stress so that he may ultimately be able to live a fairly normal life without exhibition of such grosser epileptic reactions as are shown in the seizures of his disorder. (*c*) The epileptic may be shown and taught to find a spontaneous outlet for his keen individualistic desires and thus manufacture his own interests in a healthful environment suitable to his needs and capacity.

(4) Even though many epileptics may be quite deteriorated, it is still often possible to train back their once discarded mental interest and thus restore much of their emotional and mental dilapidation. In the more favorable cases great improvement of the convulsive symptoms occurs in many such individuals and with the more or less permanent arrest of the disorder in not a few cases. A series of arrested cases of frankly pronounced epilepsies are cited to show the mental mechanism by which arrests have been brought about through an application of the foregoing therapy.

INTELLIGENCE TESTS IN CHILDREN.

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INTELLIGENCE tests properly belong in the domain of psychiatrics and psychology, and my reason for trespassing on this domain is: In my work among children the frequent request to assign a cause for the slowness in talking, some speech defect, or retardation in school, led to this study of intelligence tests as a complement to the physical examination, and a reliable family and personal history.

Until the last few years there have been scarcely any tests satisfactory for testing the intelligence; the investigator asked some questions about reading and writing, doing simple sums in arithmetic, the day of the month, and the name, age and address of the subject, without much regard to the previous training or environment.

So many mental tests have been proposed that the medical man without special training is confused as to which system to choose. It seems as though no one system was fitted for all cases ;and yet in working with children one is impressed by the wider range of applicability of the Binet-Simon tests over all others. Many modifications of the Binet-Simon tests have been made, and they are so numerous that one is inclined to be somewhat skeptical as to the need for so many of these modifications. In this work I have therefore adhered to the original Binet-Simon tests as given out by the authors.

Stigmata of degeneration are important, as well as the appearance, manner, carriage and gait. Those patients who realize their short comings are the most hopeful. A child who scribbles aimlessly on being asked to write a word is more defective than one who admits that he cannot.

The Royal College of Physicians of London defined as feebleminded those "persons who may be capable of earning a living under favorable circumstances, but are incapable from mental defect existing at birth or from an early age of competing on equal terms with their normal fellows, or of managing themselves and their affairs with ordinary prudence." It is a marked improvement at the present time that we are able to say instead of in general terms such as those just quoted, in more or less exact terms about how much the mental age of the subject differs from normal.

The first set of tests are those of Prof. Sante de Sanctis, Professor of Experimental Psychology in the University of Rome; they are good tests, and can be used by any examiner.

These tests are six in number, and in the tests different colored balls, wooden cubes, pyramids, etc., a card with triangle, oblong and square on it, as well as some questions, are used. The subject is timed for each test. A general classification can be made by these tests such as

1. There is a high degree of intellectual defect when the child does not get beyond the second test.
2. There is a moderate degree of defect when he does the fifth with difficulty and many errors.
3. There is a mild degree when he fails at the sixth only.
4. A child who does all with normal rapidity is not defective.

The Kraepelin reckoning test is useful in getting evidence of the unduly rapid onset of fatigue in an exhausted or abnormally constituted brain. It consists of the addition of successive pairs of different numbers for fifteen minutes. At the end of each minute a mark is made. At the conclusion the examiner adds up the number of sums, counts the correct and incorrect and what is more important, counts the number of sums done in each successive minute.

Abelson has evolved a small number of tests, aiming to correlate the results by the degree of competence for work in the ordinary world rather than by school records. One of his principles is that the result must be marked by either time or for accuracy, but never in both ways; in most of them he uses a stop watch. The chief tests are tapping, crossing out rings, memory for commissions, a discrimination of lengths test and a test with geometrical figures; also counting out sets of dots, memory for sentences, and memory for names.

All of the above tests give us a rough estimate only of the degree of mentality. When we come to the Binet-Simon tests we are dealing with a method of measuring intelligence which gives us approximately accurate results, just as the percentage method of infant feeding tells us approximately what the food contains.

Binet and Simon in 1906 proposed thirty tests, in which no occount was taken of the age of the child or his training. In a paper published in 1908 they evolved a set of tests for each age of the child and nearly eliminated the element of training, presenting therefor, "a measuring scale of intelligence." This has been modified again, and the same number of tests (five) used for each age except four years, which has only four tests.

The scale was originally applied to the selection of the mentally defective children in the public schools of Paris. It was then applied to the diagnosis of feeble-minded conditions. It has also been applied to the examination of juvenile delinquents and criminals with the result that we now know some of them are certainly defective mentally. It has also been applied to applicants for enlistment in the United States Marine Corps: (The Detection of the Feeble-Minded Applicant for Enlistment—Value of the Binet-Simon Scale as a Diagnostic Aid. By A. R. Schier, M.D., Acting Assistant Surgeon, United States Navy. United States Naval Medical Bulletin, July, 1913.) He says: "Of 100 applicants for enlistment in the United States Marine Corps tested by the Binet scale, 89 passed the 15-year tests and 11 were given a mental age of from 9 to 11 years by this scale. Three of the 11 given a mental age of from 9 to 11 years were perfect physically, and no mental defect was made evident by their appearance, behaviour, and manner of talking. The ordinary reading and writing test would have been passed by them and they would have been accepted for enlistment. The Binet scale in the examination of applicants for enlistment is practical and is a quick method of estimating their mental status, and therefore is an aid in the detection of mental feebleness which would otherwise pass unrecognized."

As with all instruments of precision certain definite rules must be followed in the use of the tests. When these rules are followed it is surprising how little the personal equation of the examiner varies the results. Henry H. Goddard, of the Vineland Training School in New Jersey, who examined 2,000 normal children with the help of five assistants from the Research Labratory of the Training School found that the results of the different investigators varied only slightly. He says: "There were obtained in these cases evidences of two things: first, that the Binet scale was wonderfully accurate; and second, that a child cannot learn the things that are beyond his intelligence." (Two thousand Normal Children Measured by the Binet Measuring Scale of Intelligence. By Henry H. Goddard, Ph.D. Pedagogical Seminary, Vol. XVIII, No. 2.) On the other hand there are certain ones who claim that the results are not accurate. Stuart (Variability in the Results of Intelligence Tests. By D. D. V. Stuart, Jr., M.D., Assistant Psychiatrist, Johns Hopkins Dispensary, Journal of the American Medical Association, July 25, 1914) had nine defective children examined three times at varying intervals by different examiners. He says: "While the cases cited are too few in number to afford a basis for any general conclusions, it is nevertheless impossible to deny the significance of the results obtained. These show, as will be noted, variations of from one to three years in the estimated mentality of the individual subjects. The average being between one and two years. In no case did all three tests agree. If each successive examination showed progressively higher mentality the objection might be made that all cases in the table happened to be subjects who had not reached their limit of development when first tested, and that the special class training had improved their condition. The fact that the majority show apparent retrogression or remain stationary contradicts this, and the only conclusion possible is that the differences in the results were caused by the variability of the tests." Is it not possible that this difference in the results of the different examiners might be explained on this very ground, namely, that certain definite rules were not followed in the use of the tests?

In my work with the tests I have been so much impressed with this point that I am going to give an illustration:

In the three year test three pictures are used. The exact method of procedure followed should be:

The picture is placed before the child, and the child is asked, "What is that?" A very young child may reply, "It is a picture." Then the further question is asked, "What do you see there?" No further help is given, and the questions should be put in exactly those words. This definiteness applies to the method in all the tests.

Certain precautions are necessary before the start of the examination. The room used should be a quiet one, and should be used only for this examination during the tests. One other person besides the examiner and the child is a convenience for recording the answers of the child.

Never criticize the answers, but on the other hand, encourage the child even if the answers are not correct. It is only in this way that we are able to get the best out of the child.

Each subject should be tested with the tests which correspond to his age. One can readily tell from this whether it is necessary to go higher or lower, and the tests should be gone over until the child passes for a certain age.

In recording the result of examinations all details can be entered on the history blank marked No. I, which I now show you, and the summary is made on another sheet which I also show you, marked No. II.

On the history card it is the purpose to have sufficient data to enable another experimenter to judge of the accuracy of our results. In other words, the exact words of the child are set down as fully as is necessary to get the idea. It is difficult to write out fully the words in the test where the child repeats 60 words in three minutes, but each word can be represented by a line and marked off in groups of five, and a long line drawn at the end of each half minute.

The symbols used are self explanatory and are shown on chart No. II.

In estimating and scoring the results two rules are followed. The first is: "A child has the intelligence of that age, all the tests for which he succeeds in passing. And again: after determining the age for which a child passes all the tests a year is added to the intelligence age if he has succeeded in passing five additional tests belonging to superior age groups, two years are added if he has passed ten such tests, three years if he has passed fifteen, and so on."

THE NATURE OF DEMENTIA PRAECOX.*

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THE movement of mental hygiene has become so wide spread and has made such rapid advances within the past few years that much has been written in regard to the care and treatment of nervous and mental diseases in general. If we are to make much headway, we must have the cooperation of the family physicians, the parents and school-teachers, because these are the ones coming into most intimate contact with these patients and their problems. Social service workers and employers are beginning to realize also that many of their problems are due to something materially wrong with the individual and not with environmental conditions entirely. After all, the most serious problem which confronts us is one of social mal-adjustment, whether this be the result of one of the milder forms of mental upset, as represented by the psycho-neuroses or by the most serious forms as represented by the psychoses and by dementia praecox especially. This condition is so frequently confused with the psycho-neuroses, and interpreted as a "nervous breakdown" or "exhaustion" that a general description of the different forms will probably help in recognizing these cases earlier and thus in getting them under treatment sooner and probably result in delaying the eventual outcome—deterioration—which characterizes these cases.

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The consensus of opinion regarding dementia praecox is that we are here dealing with a constitutional disorder, and that the psychosis is but an exaggerated or later development which takes place as a result of a definite type of make-up, which renders successful adjustment to social and moral obligations difficult or altogether unsuccessful. As Wells has recently stated in an article on mental adaption "Every living thing in order to live must behave towards the outer world in more or less restricted ways. Life depends on adapted behaviour." We find this adaption in every form of life from the simple unicellular forms to the more complicated human being. As we advance in the biological scale, we find that with the more complicated organisms the reactions of life have become more numerous and complicated. There are certain things in our existence which one strives for and thus we see things wished for as a result of our ambitions and desires. Some of our desires may be fulfilled, but many of them must remain unsatisfied, and it requires a very definite adaptation to realize one's restrictions in things desired and a determination to be satisfied without the unattainable. Youth frequently indulges in flights of fancy in regard to their future ambitions, and we often hear children speak of what they will do when they grow up. Now, this is an entirely healthy reaction because it represents the dynamic force for future activities. This type of day-dreaming becomes dangerous, however, when there is no attempt to put such visions into execution; it is the remaining of such visions in the psychic sphere that renders them dangerous to the individual's future success. Most of us have had from youth up a fairly definite idea of what we would like to be as grown-ups, yet how many of us have found things exactly as we have pictured them? Yet we have been able to content ourselves to a great extent with the realization, and it is this capability for adjustment to conditions as they are and not as we feel they should be that makes for success in life.

I mention this value of adjustment in life because it plays such a prominent role in dementia praecox, and the development of dementia praecox follows fairly well-defined psychological laws. Dementia praecox is not a dementia in a true sense of the word although there is a definite mental and emotional deterioration which is characteristic of it, yet contrary to the opinion of medical men in general and the laity in particular there is never any demonstrable memory or orientation defect except possibly at times in certain phases a transitory one. Nor does it always begin in youth as the term praecox would indicate. It does, however, occur more frequently during the period of adolescence, which extends approximately from the ages of fifteen to that of twenty-five. It is more often toward the end of this period that dementia praecox develops. It may, however, develop later than the above period and this not infrequently occurs.

Studies of the makeup of patients developing this form of mental disorder have shown that what is known as the "shut-in" type of personality is characteristic, and August Hoch of the Psychiatric Institute, Ward's Island, demonstrated this type of make-up in 35% of 72 cases studied and found that it was indicated in 16% of these 72 cases. He describes this make-up as having "no natural tendency to be open and to get into contact with people and things about them, who were reticent and exclusive and could not adapt themselves to situations, who were hard to influence and often sensitive and stubborn but the latter more in a passive than an active way. They showed little interest in what went on and frequently did not participate in the pleasures, cares and pursuits of those about them; although often sensitive, they did not let others know what their mental conflicts were; did not unburden their minds, were shy and had a tendency to live in a world of fancies." Many of these people will suffer in silence and often when pressed to tell their troubles or worries, cannot be induced to do so. They are very apt to lead scrupulous moral lives, to be diffident and embarrassed in the presence of strangers in general and particularly so toward the opposite sex. They are often very studious by nature and show a preference to be alone and spend much of their time in their rooms reading or studying. They rarely can be induced to talk of themselves, have little to say and do not care to be disturbed in their mode of living. They are in the male sex known as "mothers' boys" and are often the mother's favorite. They belong to the home type of boy or girl and are frequently held up as examples to be followed by the rest of the family. They are of a self-effacing, unobstrusive nature and often exaggerate the importance of personal difficulties by keeping them to themselves rather than discussing them and asking advice concerning them. They are very apt to indulge in masturbation and this is a constant source of worry and self-reproach to them and is often exaggerated in its importance as a result of reading quack literature concerning the deleterious effects of the habit or as a result of bad advice given them by some well-meaning layman who puts a false value and importance upon this habit. They do not attempt to sublimate this perverted form of sexual activity by taking a healthy interest in some form of athletic activity or social life, and as a result their introspection in regard to themselves and their shortcomings becomes gradually more marked as time goes on. This soil forms the real basis for the subsequent development of the psychosis.

As to the intellectual capacity of these patients, many of them show definite evidences of mental deficiency in early youth, but, on the other hand, the majority of the patients are apparently of normal intelligence and have been average students in school. A number of the patients may be looked upon as being precocious and are really brilliant in their studies. For example, I remember quite well one of my patients who had read most of Shakespeare's works at the age of ten. Frequently, ministers, physicians, lawyers and school-teachers show this form of mental difficulty. Statistics on this point give 27% men and 21% women of average intelligence. 55% men and 66% women had good and even remarkable intelligence; 18% men and 13% women were below the average intelligence.

Dementia praecox is divided into three sub-groups: the simple form, the hebephrenic form, the catatonic form and the paranoid form.

The simple form is the one which is most difficult to recognize, as it is not characterized by a delusionary or hallucinatory trend but rather by an increasing withdrawal from social activities and an exaggeration of the "shut-in" personality as described above. With this, there is a profound emotional disturbance; they show an ever-increasing indifference; complain much of headaches, fatigue, lack of concentration and often of difficulty in thinking. They often seem worried and depressed, cry without apparent reason and spend much time in deep thought, yet when asked if they are depressed or worried, deny that they are and give no adequate explanation as to their conduct. When spoken to, they brighten up and answer questions readily, speak of plans for the future but never execute them. It is noticed that their work at school shows a decided change; their marks are not as good as they formerly were. In their occupations, there is noticed an increasing indifference and carelessness and because of this it is often said that their memory has failed, whereas the memory is really intact but the attention and volition have undergone a most decided change. Professional patients show this same change quite characteristically. These patients, particularly when youthful, are accused of being lazy and without ambition, the real nature of their trouble not being recognized by their relatives. These patients quite frequently have some insight into their condition, especially at the onset, and blame their difficulties on their habit of masturbation. This simple form may have transitory, unexplained mood deviations, unexplained excitements, oddities of conduct of an impulsive nature but quickly subsiding, and may also indulge in actions which show a want of judgment; for instance, exposure of person in public places, etc. These patients, if not placed under treatment, undergo deterioration fairly rapidly, are often looked upon as "nervous breakdowns," particularly when they complain of various physical symptoms, such as headache, constipation, insomnia, loss of appetite and menstrual irregularities. These cases may be differentiated from the psychoneuroses, as represented by neurasthenia, by the peculiarity of make-up, the insidiousness in the development of the condition, the vague, poorly-defined and described physical complaints and the gradually increasing indifference and apathy. As time goes on, these patients are supported at home by indulgent relatives, being regarded as harmless or else become one of our great "hobo" or petty criminal class. Wilmans, as quoted by Stedman, found 66 cases of dementia praecox in 127 vagabonds. Likewise many of them become prostitutes, or representatives of the I. W. W's, being easily led and persuaded and showing lack of moral sense. I regard this as by far the most important type of dementia praecox and the one less often recognized until it is too late.

The next form of dementia praecox, the hebephrenic, is known as the "silly dementia" and has been described by Kraepelin as being often characterized at the outset by a fairly-well marked depression; this is quickly replaced by the presence of fairly well-defined delusions and hallucinations but the delusions are often of a vague, ill-defined persecutory type based on auditory hallucinations. The transitory character of the different delusional ideas and the ever changing content of the hallucinations is characteristic of this type. The rather rapid onset of deterioration, after more or less episodes of excitement, is usually the rule.

The catatonic type, which used to be so frequent, is seen very infrequently at present, probably because these patients are brought to us earlier in their psychosis. This form is characterized by mutism, assumption of fixed attitudes, refusal to eat or to tend to the emunctories lasting sometimes for years at a time. This quiet, mute attitude may be suddenly replaced by a marked impulsive excitement and a very incoherent speech. The onset and clearing up of this form may be quite rapid.

The last form, the paranoid, is usually of very gradual onset although relatives very rarely recognize the change until it is called to their attention. Usually, there is a forerunning period of from one to two years, during which it is noticed that the patient is more quiet, shows less interest and shows an increasing indifference toward his studies or work. They also complain of vague physical difficulties. After this phase has lasted for some time, there is usually a quite marked excitement with fear and apprehension in reaction to a fairly well-defined delusionary persecutory trend based on auditory hallucinations in which they are threatened, called vile names and usually accused of irregular or perverse sexual practices. This phase brings the friends or relatives to a realization that what was formerly thought to be a "nervous breakdown" is really a mental disorder. The persecutory ideas persist for a time and then there is usually a subsidence. This form is usually called paranoia by the average medical man, but there is a marked difference from paranoia in that the age of onset is earlier, it occurs in an individual who presents a far different type of make-up from that found in paranoia in that the paranoiac is a self-opinionated, assertive individual who constantly finds fault with his surroundings and who gradually builds up, over an extended period of time, usually years, a well-systematized persecutory trend without the presence of hallucinations and usually without the profound indifference and deterioration which eventually characterizes dementia praecox. These patients may be actively suicidal or homicidal.

We are now prepared to discuss the nature of dementia praecox in its different forms. Kraepelin has taught for years and still believes to a certain extent that dementia praecox is the result of an autointoxication, but this has not been found true by competent observers, and the toxic theory fails to account for the mental manifestations taking on the particular form that is found. The most satisfactory explanation is that which is founded on a psychological basis. It is seen to be a definite reaction to a mental conflict, resulting in the splitting of the consciousness and the coming to the surface of unconscious strivings and longings. We see that these patients, often in school and at work or in their social life, are incapable of meeting a situation which suddenly confronts them; it is not acceptable and they are therefore driven back upon themselves. The resulting conflict produces the disease picture in its various manifestations. The simple form of the disease shows a less healthy type of reaction than some of the others; instead of facing the conflict squarely, the individual simply withdraws himself from it, becomes more shut in and introspective and deteriorates gradually. The hebephrenic form is a more adequate attempt to face the conflict but it is not effective because of the rapid deterioration and the constantly changing content of the delusional trends. The catatonic form differs from either of the above in that there is a sudden overwhelming of the patient by the conflict and no attempt at adjustment is made. There is a complete shutting out of the real situation and a withdrawal into a world of his own. In the paranoid form, there is a much better attempt at adjustment than in the other forms because the persecutory ideas usually represent unconscious wishes which have never been allowed to come to the surface, as being fulfilled. The psychosis here represents an attempt at the solution of a painful conflict and in it the desires are represented in the persecutory ideas and hallucinations and the patient thus manufactures, as it were, a world of his own in which life is more pleasant than the actual reality.

The catatonic form has the best prognosis because it has the most acute onset, while the hebephrenic and simple forms tend to a steady deterioration. The paranoid form has definite remissions which may last for several years after which however there is usually a recurrence of the same ideas with more or less progressive deterioration although a number of cases will not show a marked deterioration for years. In all of the patients, however, there is a very definite change in the individual; there is rarely a return to the former efficiency and there is a well-defined tendency to a regression to a lower level of efficiency at which they may get along very comfortably for some time. This is seen most frequently in institutions where the greater part of the work is done by dementia praecox patients. Of those who remain outside, many, as stated above, are enrolled in the ranks of prostitutes, tramps and petty criminals.

The outcome and course of any one case cannot be predicted except as given above in general for the various forms. These patients usually remain in good physical condition for a number of years, after having a residence in State Hospitals of from 25 to 30 years until some intercurrent infection terminates their existence.

What then can be done with this class of patients, who represent by far the greatest number of admissions into our State Hospitals, and who, though showing a definite tendency toward mental deterioration and inefficiency, yet remain in good physical health? Psychiatrists believe that the prophylactic effort must be made with the child while in school. Where a youngster shows a difficulty in getting along at his studies or in complying with school discipline, a thorough study of his mental and physical condition should be made because in the school we have a situation which requires the first great need for adjustment and the ability to adjust here often foretells the future ability of the individual for successful effort in his future life. Further, the period of adolescence represents the time when the youth should be enlightened as to his real purposes in life and the various physiological activities and their purposes explained fully by competent physicians and the knowledge of these not allowed to come from the streets or quack literature. I believe that undue emphasis is laid upon masturbation as an etiological factor in the causation of psychoses; it is more apt to be a symptom of an already existing psychosis when carried beyond a certain period. It is also the very nature of the act itself requiring for its consummation seclusion and fanciful day dreams which aids in the subsequent development of a "shut-in" personality upon which we see that dementia praecox is so prone to develop. The cultivation of healthy mental habits, both in the ordinary life of the individual and in his sexual life, is the thing to be desired. The sexual activity during adolescence should be directed into other spheres of activity, such as athletics, joining of military squads or the boy scouts, and above all, the cultivation between parents and children of confidences which can be talked over between them and often dangerous conflicts avoided. The mother who shows an undue attachment to an only child should be taught to realize that by indulging his every desire and whim she is unfitting him for the burden in life which he must assume sooner or later. Further, when a case of dementia praecox comes to the attention of the general practitioner, especially one of the cases showing little beyond indifference and vague physical complaints and the patient does not improve under the prescribed treatment, get an opinion by some competent neurologist or psychiatrist and thus save yourself future humiliation and remorse for not recognizing the nature of the case earlier. After such a case is discovered, the question naturally arises as to what can be done with it. If, under the treatment as outlined above at home with cultivation of an outdoor and social life, the patient does not improve, then the question of hospital treatment should be considered. Many of these cases improve decidedly in sanitaria and State Hospitals where the less complex and routine life seems to exert a favorable influence. Many of these cases show a particular liking for various normal occupations, especially basket-work and also agricultural work and these seem to exert considerable influence in preventing deterioration.

In writing this paper, I have drawn freely upon a paper recently written by Dr. Henry H. Stedman of Brookline, Mass. and have also drawn freely from the article on Dementia Praecox in White and Jeliffe's text-book on Diseases of the Nervous System and take this opportunity of extending proper credit to these authors.

AN UNUSUAL CASE OF APHASIA.

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Brooklyn-New York.

TO possess language an individual must be able to recall the memory pictures of the sound of a spoken word, of the appearance of a written or printed symbol, and of the particular muscular movements required by the tongue to pronounce a certain word and by the hand to write it. These various types of memory pictures are intimately connected by association fibres which ramify in all directions, and a break in any of these associational paths produces either a sensory or a motor aphasia according to the predominating feature of the symptom complex. One of the definite connections is between the acts of speaking and writing. One may notice this in observing children or uneducated adults attempting to write. Frequently they will move their lips or even utter the words they are laboriously inscribing.

The areas for these two centers are closely approximated—that for the motor speech in a right-handed individual is in the posterior part of the third frontal convolution on the left side and the center for writing is probably in the same position in the second convolution. This is apparently confirmed by a case reported by Trousseau of a deaf mute who had learned to talk by the finger language, and who lost this power through a lesion near the writing center, though the fingers themselves were not paralyzed.

A motor aphasia consists of an inability to initiate the effort required to set in action the proper motor mechanism necessary for word production either in speech or writing.

It is this latter variety which manifests itself in the patient I have to present this morning though one of unusual type. I will not go into the history or physical examination in detail but will give the salient points as they affect the case.

The man is forty-two years old, a porter by occupation, and American born. He has had diabetes for several years, and a primary lesion, sine sequlae, in 1892. There are three items of interest in his past history, one being that though he has always been right handed, for some reason or other when a lad he used his left hand to throw a ball. The second is that in 1909 he had a compound fracture of the right forearm. The third, in 1912, he suffered a traumatic amputation of the terminal phalanx of the right index finger.

Until this time he had written with the right hand, but the two accidents threw more and more detail upon the left until finally he learned to write with his left hand. Thus while he was naturally left brained, he had the elements for the foundation of a right brain.

Four years ago the patient had a cerebral hemorrhage which paralyzed the whole right side of the body and the power of speech. He made a good recovery of the motor function of the two extremities and face, but the speech was not restored in the same happy fashion.

However, by persistent effort, the patient has learned to talk with the right side of the brain, relearning the alphabet letter by letter. His conversation now proceeds with the same slowness and precision that a child uses when reading a lesson aloud, each syllable being pronounced separately, though at no time has his knowledge of what he desires to say been at fault.

An interesting question arises as to whether he would have been able to reeducate the speech motor mechanism had he not chanced to have previously used the left hand to the extent he did, when from natural choice he would have employed the right. In conjunction with the phase of the topic I may add that at the time of the hemiplegic attack he was at the Neurological Institute and was told there that his speech would never return.

The second patient is one which Dr. Roberts has asked me to present because of the interesting history. In contrast to the previous patient this boy's speech disturbance is of a purely psychic nature. He is a Canadian college student, nineteen years of age, who took part in the intense activities on the battle line in France. In one of the Somme charges he and three comrades, well in advance of the remainder of the command, captured a German trench which almost immediately became no-man's land through the retirement of the others in their rear. Two of the four were the patient's own brothers, and they and the fourth member of the party were killed by the explosion of a shell which in no wise injured our patient. He was, however, buried in the debris up to his chin with his arms pinioned to his side and one of his brothers with his leg blown off was thrown almost across the back of his neck, living for almost three hours before death relieved his suffering.

The patient remained thus for two days and nights expecting momentarily to be killed by the constantly exploding shells, some of which were so close that he felt their heat. If for a space the bombardment ceased, he was in continual dread of injury from those taking part in the charges and countercharges rushing by him. On the second night a listening party discovered him and brought him back in a maniacal condition. He was sent to the London Hospital where in time he was cured through hypnosis. Subsequently he returned to America.

Night before last he was walking on Hanson Place when the backfire of an automobile close beside him recalled so vividly his experiences in the trenches that the shock dazed him, he lost his power of speech, and had a certain amount of amnesia. Examination of the sensory apparatus reveals glove and stocking anaesthesias in the upper and lower extremities respectively. All of the symptoms are of a psychic nature.

He is being treated by hypnosis; the speech is becoming more and more perfect, and in time he will make an entire recovery.

EDITORIAL

THE DOCTORS' SHARE.

IN the birth of enthusiasm for national service, one is impressed by the widespread desire for everybody to do something. One is also impressed by the general desire to do that something in his own way. This is the keynote of inefficiency. There are at present working on the problem of medical service for the country a variety of agencies more or less independent: there is the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, the Adjutant General of the State of New York, the National Council on Security and several sub-committees, and each is striving in its own way to provide an efficient medical corps for active service. Then there are the already existing Red Cross units, some of which have been ready for a long time, while others are being hurriedly recruited now, and finally there are numerous individuals who are urging everyone within their hearing to join something. Local enthusiasm is also at work and the Police Department of the Greater City of New York has organized a body of auxiliary surgeons for emergency service. Some of the experiences incident to the formation of this latter corps are illuminating. As an epitome of the national problem these experiences fully illustrate two essentially human attributes—selfishness and vanity. Smith is unwilling to serve because Jones was asked first. Green will not cooperate because Brown has had a shade of preference. It may be that the practice of medicine, which is so essentially a matter of details, tends to belittle its practitioners and make them jealous of small privileges and yet it is hard to believe that a profession which calls for such constant sacrifice should not broaden and humanize rather than contract.

In passing it is also interesting to note that the City Government in providing measures of security for the city through the Police Department deliberately negatived those measures by refusing in advance to sanction any expenditure of money, an attitude in strong contrast to the National Government which, when it did act, was ready to provide generously regardless of expense. One is quite ready to concede that good business methods forbid the reckless spending of money for contingencies that do not exist, but the total lack of supplies which confronted those who were planning for the City's benefit, the scarcity of supplies in the open market and the rapid increase in the cost of those supplies with every passing day would have appealed to most private business enterprises as the best argument for securing at least an option at prevailing prices. Then came an offer of help from private sources, but as is so often the case, the choice of what form that help should take was limited by the caprice of the prospective donors. It became evident that if they gave it was only to help the City in their own way—if the spot light could not be turned on them they would not play. This is only by illustration of the problem which confronts the National authorities who must provide not only an effective medical corps for active service, but must leave behind an equally effective medical service for the civil population; we are prone to forget that even if an army of a million men be sent there are yet approximately eighty-nine millions of people left in the country who must be cared for and fed and clothed and coordinated. To meet this problem efficient cooperation is best obtained by leaving to the central body the organization of the medical work. It is sometimes harder to sit still and fold one's hands and wait than it is to rush in and do something; it is infinitely harder to see somebody in whom we may not place implicit confidence conduct affairs that we think we could do better ourselves; *but* if that work is already under way our individual interference will do much more harm than good. Suppose we are striving to render our own hospital most efficient for service when it is needed, if every other institution follows suit at once and everyone of them strives to buy an abnormal supply of gauze and bandages and coal and canned goods, the unseemly demand is going to raise prices out of all proportion to the urgency of the situation. In the hysteria of helping the government, we forget that it will be months before hospitals here will begin to receive wounded American soldiers and that there is ample time for deliberate and systematic preparation such as will not interfere with the uniform development of hospital resources all over the country and, conversely, the hospitals must not be crippled by the indiscriminate organization of surgical units for outside service—the civil population must still be provided for, especially in the metropolitan districts. Mr. J. Philip Bird, speaking recently before the Manufacturers' Association in New Jersey on the question of industrial cooperation, ably summed up the situation as follows:

"Let us not," he said, "go about in such haste to be of service to the country that we lend ourselves to schemes of national service whereby every one gets in every ones else's way and more harm than good is accomplished. If we are zealous, let us see that our zeal is well directed. Let us not spend the enthusiastic energy of June in planting potatoes in back yards to rot in the lazy heat of August." Mr. Bird criticised a Government official who sent a thousand Boy Scouts out to till 3,000 acres of government land near Washington. He pointed out that the land should have been cultivated by machinery.

"We should remember," he added, "that this is the United States, the nation that gave the world the gang plow, the tractor, the potato planter, duster and digger, and if we are going in for potato raising for the benefit of the nation let us do it on a scale worthy of America by utilizing our inventions and land in a substantial manner and not go about digging up back yards, tennis courts ,and golf links as a fad."

One may with great propriety apply what he has said to the medical situation and leave to the central committee the work of organizing the doctors of the country in the most efficient way.

H. G. W.

HELP THE LIBRARY.

The Practitioner's Club, of Brooklyn, through Dr. Arnold W. Catlin, has circulated an appeal to the members of the Medical Society of the County of Kings for contributions toward a fund in memory of the late Dr. John E. Sheppard, to be devoted to the betterment of the Library. The appeal is peculiarly timely inasmuch as the Library is likely to feel the stress of hard times even more than in the past. The increased cost of living about which we hear so much and which we are likely to experience in increasing measure, the call on physicians for military service and the diversion of medical activities into broader channels are all bound to weaken the none too active support which the Library and its building have felt in the past. The Library of the Medical Society of the County of Kings is virtually dependent on Society dues. There are a few available funds, the interest of which is devoted to the upkeep of the Library, but these aggregate only about $9,000.00. The anarchy in Mexico has practically wiped out a fund of $5,000, that was invested in Mexican securities and altogether the outlook for the immediate future is not encouraging. For a number of years the Brooklyn Medical Library Association has contributed a considerable sum toward the purchasing and binding of periodicals, but this charity is being worn threadbare. There is no question that a good working library for physicians is essential to the welfare of the medical community on Long Island and the Library of the County of Kings with its 70,000 volumes and periodicals is a nucleus which could be rapidly expanded into a most valuable asset to the community could the necessary interest be aroused. The difficulty lies in the incomplete selection of recent publications as compared with the Library of the Academy of Medicine in New York and the "let George do it" attitude of the general profession here in Brooklyn. Moderate cooperation on the part of all Long Island physicians would speedily provide a plant for reference and for the loan of the most recent publications which at present are only available as they are contributed through the book exchange of the New York State Journal and this publication. It is easy to foresee how the growing dearth of paper, increased taxation and lessened production will shortly reduce the number of medical journals and books as well, so that it is imperative to provide at once for a great increase in both the number and variety of current journals. The proposed increase in postage will undoubtedly curtail the circulation of a number of the smaller journals even if it does not put them out of business altogether; they will be withdrawn from our exchange list and the Library will be compelled to buy them to keep its files complete.

While it is true that a comparatively small proportion of the general profession utilizes a medical library for general reference, it is equally evident that a very large number consult it occasionally, and in the interest of both classes its shelves must be complete. The physicians of Long Island must be brought to realize how personal to themselves this question of a complete, modern, reference library is. If every one cannot contribute something in cash he can surely do his best to interest the lay public and obtain contributions in that way; every physician on Long Island should feel obligated to do something. If he is not eligible for membership in the Kings County Medical Society he may join the Brooklyn Medical Library Association and contribute $5.00 a year through that channel. This Society has no expenses and all its collections are used for the advantage of the Library. It has for many years been supported by a loyal few and at this time it should appeal strongly to many who have not so far given their help.

If neither one of these methods appeals give fifteen minutes thought to what your individual duty may be in helping the Library to be a source of help to you when you need it and do something to help.

H. G. W.

ONE DANGER OF A GREAT ARMY.

In the glitter and enthusiasm of military activity, in the gathering together of young men to make an army, in the concentration of recruits and training camps, one is apt to forget an intensely human side, the purely animal nature of which is the main deterrent from its public discussion. In all that we hear from the battlefield, in all that we read of wounds and death, of victory and defeat, nothing appears in the public press about the venereal hospitals. In all the newspaper and magazine reports which told us what a splendid sample of an army we had sent to Mexico, not one word was said of the number of cases of venereal infection which, in spite of all reasonable precautions, ran well up into the thousands upon thousands and were brought back from the Mexican Border to be multiplied broadcast throughout the land; and when this hideous fact was presented before a medical gathering in a Texas city, it was made a subject for jest among the physicians of the audience.

Let this appeal directly to you, Doctor. Perhaps your son will be drafted; with your knowledge of what syphilis usually, and gonorrhoea often leaves in its wake, can you laugh if your son gets infected? Can you remain indifferent if some one else's son infects your daughter? These are bald, crude, unvarnished thoughts. Have you done your part to prevent the venereal peril in our own armies—are you cooperating in any way with the efforts of the Council for National Defense to prevent a great wave of veneral disease sweeping across the country and adding its millions to the millions already diseased? Use your influence in the community and explain to your boy and others what paresis, locomotor ataxia, pelvic abscess, ophthalmia, and a few dozen other trifling consequences of youthful indiscretions mean. It is part of "doing your bit."

H. G. W.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular meeting of the Brooklyn Surgical Society, held at the Building of the Medical Society of the County of Kings, 1313 Bedford Ave., Brooklyn, Thursday evening, March 1st, 1917 at 8:30 p. m.

The President, John E. Jennings, M.D., in the Chair.

Program.

Report of cases:
A. (1) Acute inversion of the uterus.
(2) Fracture of Femur complicated with hemophilia.
(3) Lipoma of the Abdomen. Specimen.
Joseph Tenopyr, M.D.
Case 2 discussed by Dr. Richard W. Westbrook and Dr. Joseph Tenopyr.
B. (1) Results in fracture of the neck of the femur. Whitman method. X-Ray.
(2) Multiple Fractures of the lower extremities. Patient. X-Ray.
(3) Floating appendicular abscess. Patient.
James Watt, M.D.
Case (1) discussed by Dr. J. Bion Bogart, Dr. John A. Lee and Dr. James Watt.
C. (1) Splenectomy for Splenic Anemia.
(2) Two cases of Traumatic Diaphragmatic Hernia.
James M. Downey, M.D.
Paper: "Benign Tumors of the Stomach."
Charles H. Goodrich, M.D.
Discussion by Drs. John H. Long, John A. Lee, Raymond P. Sullivan, James M. Downey and Charles H. Goodrich.

An Acute Inversion of the Uterus.

Joseph Tenopyr, M.D.

On January 14th, 1915, I was called to a Sanitorium in my neighborhood by a physician who informed me that a patient whom he delivered had an inverted uterus following the delivery of a child.

On my arrival I saw a young woman of twenty-two, weighing about 180 lbs. in the lithotomy position, pulseless and gasping for air, mucus membrane of the lips were pale, expression anxious. The doctor told me that he had replaced the uterus. Suture material being handy I placed four sutures in the perineum which was torn down to sphincter ani.

Patient was placed in bed and shock was treated by elevation of foot of bed, by morphine, hyodermoclysis and saline by rectum. At six o'clock that morning the patients' temperature was sub-normal, pulse 156, respiration 32.

The following evening I was again called because the patient complained of severe pain in lower abdomen and also of terrible pressure on perineum and inability to urinate.

The patient was placed on the operating table again and uterus found inverted and protruding from the vagina. I believe that the uterus was never replaced. The reason why it did not protrude from the vagina on my first visit was because the patient had one-half cc. of pituiterin and one dram of fluid Extract of Ergot within half an hour of each other shortly before I came.

The patient was given a general anaesthetic. The uterus was replaced by placing the right hand in the vagina, the middle finger pressing in the contracted cervix through the lower uterine segment, the palm of the hand supporting the inverted fundus.

It took about three-quarters of an hour to replace the uterus, because of the difficulty to overcome the contraction of cervix. After the uterus was reposited, it was swabbed out with Tr. iodine. Then uterus was packed with gauze which was saturated with Tr. iodine. Morphine sulphate grs. 1/8 was given every 4 hrs. The patient was then placed in bed and shock was treated by saline per rectum, heat and elevation of foot of bed, packing was removed after the first 24 hrs. Patient took large quantities of water by mouth after the first 24 hrs. She was burned by metal hot water bottle on the side of the left thigh. The burn measuring 6″ by 4″. This extensive area was healed by the use of a 2 per cent ointment of Grubers basic fuchsin. It was not necessary to graft this area.

The patient began to run a septic temperature. Blood culture were negative. On January 28th, about fourteen days after the uterus was replaced the patient developed a phlebitis in the left leg; this was treated by elevation of the leg, Ichthyol Ointment and heat. On Feb. 1, 1915, pulse became so weak that correct count was impossible. Morphine Sulph. was increased to grs. 1/4. Cardiac stimulants were given, camphor and digitalis. On Feb. 26th, patient developed phlebitis in the right leg, this was treated the same as that of the left leg. On March 6th, 1915, patient left the Sanitorium in very poor condition, pulse 128, temp. 100 and resp. 30.

At home the patient improved rapidly and was discharged on April 30th. I saw the patient in May, 1916, and she had a leg ulcer which was due to the phlebitis; this was cured by rest in bed. Patient gained weight and is well at the present time.

Resumé.

The patient from the beginning of her illness on Jan. 14, 1915, till March 20th, 1915, was given enough morphine to keep her somnolent, heart stimulants, such as camphor and digitalis were given. After morphine was withdrawn caffein sodium benzoate was given till the middle of April. This patient did not show the usual very marked emaciation. She lost weight but one could not say that she was emaciated at any time. This I believe was due to complete morphinization and the pushing of carbohydrate diet. Sugar in every possible form was given and large quantities of water—as much as 5 qts. in 24 hrs.

The family history was negative.

The patient was a primipera. Previous history was negative as to the present condition.

Fracture of the Femur Complicated by Hemophilia.

On Sept. 7, 1915, a well-developed male patient, J. L. G., age 20, was admitted to the Kings County Hospital on the service of Dr. J. B. Bogart after having fallen from an embankment. All the classical symptoms of a fracture of the right femur at the junction of the upper and middle third were evident. He presented the appearance of being very anaemic.

Family History: A brother of the patient's mother died of hemorrhage following a tooth extraction. Patient's brother would bleed profusely from slight wounds.

Previous History: Patient would bleed excessively from a very slight wound of the skin. When 12 years of age bled very profusely after having a tooth extracted. It was necessary to keep him in a Sanitorium for one week.

Sept. 8, 1915: Patient complains of a great deal of pain at site of fracture. Temp. 99 4/10, Pulse 88, Resp. 24.

Sept. 9, 1915: Patient was very weak. Anaemia more pronounced; seems on verge of syncopy. Thigh seems quite enlarged. Buck's extension applied. Much ecchymosis near right groin. I suggested the use of horse serum, and 5 cc. was given. Temp. 100, Pulse 100, Resp. 24.

Sept. 10, 1915: Somewhat worse. Temp. 100, Pulse 110, Resp. 24. At this time there were 31 cc. of horse serum injected subcutaneously.

Sept. 11, 1915: Patient in poor general condition, very anaemic at time compelled to sit up "to get his breath." Effusion spreading genitalia and gluteal region showing infiltration, 56 cc. of horse serum given. Temp. 100 4/10, Pulse 128, Resp. 28.

Sept. 12, 1915: General condition slightly improved effusion still continues but not so rapidly as before. 55 cc. of horse serum was given.

Sept. 13, 1915: General condition poor, pulse very rapid and poor in quality. The right thigh is twice the size of the unaffected one. Occasionally had attacks of air hunger, ecchymosis now includes the genitalia, perineum and lower right side of abdomen. A patient from the medical ward donated 65 cc. of whole blood which was injected subcutaneously.

Sept. 14, 1915: General condition shows slight improvement. Mucous membranes very pale. Patient has no complaints. Pulse rapid, poor quality.

Sept. 15, 1915: Much improved this a. m., pulse better, quality slower, appears brighter, more comfortable, 84 cc. of human blood injected under skin.

Sept. 16, 1915: Patient states he feels well, general condition much improved, pulse better quality, not so rapid, effusion does not seem to extend any further.

Sept. 17, 1915: General condition good, there seems to be no more active bleeding. Still very anaemic. From this point on the patient had no further bleeding and went on to recovery.

March 1, 1917: Patient seen today. There is ¾ inch shortening with very little deformity. Patient's mother states that he cut himself recently and the bleeding stopped very readily.

Fracture of Femur Complicated With Hemophilia.

BY DR. RICHARD W. WESTBROOK: "I think Dr. Tenopyr said that he gave as much as 84 cc. of pure blood under the skin at one time. Is that right?"

BY DR. JOSEPH TENOPYR: "Yes, that is right."

BY DR. RICHARD W. WESTBROOK: "How did you give it, spread it around a good deal?"

BY DR. JOSEPH TENOPYR: "In one place. I left the needle under the skin and had another in the vein of the patient. I simply drew it from the donor and placed it under the skin of the patient. That blood was absorbed very rapidly."

BY DR. RICHARD W. WESTBROOK: "Without making a hematoma there?"

BY DR. JOSEPH TENOPYR: "It would make a hematoma for a short time, for twenty-four hours. When I come back the next day it would be gone."

Lipoma of the Abdomen.

Mrs. P., occupation housework, age 50, married.

Previous History: Negative as to present condition.

Present Illness: Menstrual periods regular up to three years ago, then became irregular occurring every two weeks. Noticed two years ago that abdomen became larger, wearing a corset became very uncomfortable, patient would get very tired and abdomen felt sore. When in bed patient would be comfortable only when lying on her side, patient states she would feel abdomen sag to the bed when she would lie on her side.

Physical examination of patient shows a poorly nourished female, extremities and chest show emaciation, the facial expression is pinched.

Abdomen is quite large, on palpation a large mass was felt in the abdomen extending from the pubis to the ensiform cartilage. This mass could be moved from side to side, fluctuation could be made out over the mass. Free fluid in the abdomen could not be made out.

Vaginal Examination: Uterus was displaced to the left and backwards, fundus could not be made out.

On Feb. 3rd, 1917, I operated on the patient at the Calendonian Hospital.

Operation: When the posterior sheath of rectus was incised a large amount of fat was encountered. After incising it and trying to get into the abdominal cavity, I gave it up and passed my hand under the posterior sheath of rectus and found that I could separate this fat from the sheath anteriorly and the peritoneum posteriorly. I continued this process of shelling out what now appeared to be a large lipoma. It separated very readily in all directions until I came to the pelvis, here it was quite adherent, and bleeding was quite profuse, when the mass was freed from its attachmnt in the space of Retzius. It apparently had its origin in the fat about the bladder. When it was removed it appeared like a globular mass of fat. It weighed 15 lbs. 11⅔ oz.

Dr. B. Terry reported after microscopical examination that it was a lipoma. Patient made an uneventful recovery and at the present writing is at home.

Fracture Neck Femur. Whitman Treatment.

James Watt, M.D.

Sara Dannic, age 34, shopwork, U. S.

Chief Complaint: Limping and pain in left hip. Present trouble fell downstairs five weeks ago, after the accident was able to walk, but had a moderate degree of pain in hip. In a few days the pain and swelling increased to such an extent that it was necessary for her to remain in bed.

Physical Examination: Relative to Chief Complaint: Tenderness over left hip joint. Moderate limitation of motion in all directions, especially flexion and abduction. Measurements ¾ inch shortening left leg.

X-Ray Department Reports: Fracture neck of femur. December 8, 1915. Whitman Plaster Paris spica applied with leg in abduction.

January 17, 1916, long spica removed and short spica applied.

February 22, 1916, cast removed.

Discharged March 3d, 1916.

Measurements on discharge ¼ in. shortening.

S. De A., age 58, Italian, married, admitted Jan. 16, 1917.

Chief Complaint: Abdominal pain.

History Present Illness: (Patient speaks no English, and history was obtained by aid of a rather poor interpretor.) Fifteen days ago began to have pain in upper right abdomen, after three days' pain became general, and was associated with distension, nausea, and vomiting every few hours, though never of fecal character. Bowels have only moved three times in last two weeks. The pain subsided after the first week, and became intermittent and colicky, over the upper right quadrant, and the distension also became much less.

Past Medical History: No distress after eating, nor previous attacks of abdominal pain. Never jaundice.

Menst. History: Menapause ten years ago—negative since.

Family History: Married, three children, living and well.

Personal History: Housework, fairly regular habits of living.

Physical Examination: Thin, sallow, elderly, female, septic, "hectic flush."

Face: Eyes—Negative (no jaundice). Mouth—A few carious teeth with gums showing pyorrhea. Tongue—Heavily coated. Breath—Foul. Pharynx—congested.

Neck: Negative.

Chest: Heart, and lungs negative.

Abdomen: Slightly distended, with prominence in upper right quadrant in which a very tender mass, is easily palpable. Feeble peristalsis throughout abdomen.

Pelvic: Negative.

Extremity: Negative.

Clinical: Temperature, 101½, Pulse 125, Respiration 30. Urine, faint trace of albumen, a few grandular casts. Blood 20,000. Leucocytes, 80% polymorph.

Operation, January 16, 1917: Ether anaesthesia.

Transverse upper abdomen incision. No free fluid in abdomen. No mass found. Gall bladder, small, thickened, containing several movable stones, (not the cause of so acute a picture). Hand in abdomen, bimanual with hand over sheets, discloses mass now in lower left quadrant. Lower median incision, a mass covered with omentum size of tennis ball drawn into incision from left iliac fossa. Omentum freed and a large amount of pus evacuated from an abscess above and to the left of the ileo-cecal junction. (The cecum being widely movable on a long mesentary.) Abscess cavity drained and abdominal wounds closed.

After Treatment: Fowler's position, Murphy by bowel, morphine, gastric lavage, and hypodemochysis 1000 cc.

Note: A stormy convalescence, for two weeks during which time a fecal fistula appeared in the wound. This drained for about ten days and closed spontaneously.

Multiple Fracture Lower Extremities.

Alice Morgan, 5½ years, U. S. A., admitted July 19, 1916.

Chief Complaint: Shock and crushing injury to both legs.

History of Present Illness: Half hour ago while playing near pile of lumber a heavy log fell, knocking her down and pinning her across the legs. Was brought to the hospital in profound shock.

Past Medical History (From parent): Pneumonia one year ago, ill for six weeks and never strong since that time. Otherwise negative.

Personal History, Family History: Negative.

Physical Examination General: Delicate little girl in shock, skin cold, pale and perspiring. Pulse weak, fast, pressure low.

Face: Pale, pupils dilated, lips cyanosed.

Chest: Heart rapid, no murmur, muscle sound poor.

Lungs: Negative.

Ribs: Negative.

Abdomen: Negative, no signs of intra abdominal injury.

Extremities: Crepitus and false motion in lower third of both femora, with severe contusions of soft parts of left thigh. Deep laceration, probably compounding fracture of left femur, but no bone protruding. Crepitus and false motion in upper third of the left leg. Contusions of soft parts around left ankle.

Perineum: Negative.

Notes: For three days the child's condition did not permit of more than retaining dressings to the fractures with iodine dressings of the laceration. She slowly recovered from her shock and on the 4th day was placed in double swinging Hodgins splints, using the double inclined plane and Buck's extension of lower third of legs to the lower end of the Hodgins splint. Both splints suspended over bed. The contusions and laceration healed in about two weeks, and the Hodgins splints were kept in use for three weeks when the limbs were straightened out and held in Volkman's Baskets between sand bags. On 9-14-16, she first tried to walk with aid of crutches and was discharged on 9-29-16, able to walk holding her companion's hand.

X-ray: Left femur—Fracture in lower third. Right femur—Fracture in lower third. Left tibia—Fracture in upper and lower thirds. Left fibula—Fracture in lower third.

Measurements made yesterday: Left leg—Anterior superior spine to internal malleolus, 22½ in; anterior superior spine to base patella, 12½ in. Right leg—Anterior superior spine to internal malleolus, 22¼ in.; anterior superior spine to base patella, 12¼ in.

Results in Fracture of the Neck of the Femur. Whitman Method. X-ray.

James Watt, M.D.

Dr. J. Bion Bogart, in opening the discussion, said:

"I am personally very much interested in fractures of the neck of the femur. I am very sorry that Dr. Watt wasn't able to present all his patients for the reason that while what I call the fracture of the true neck of the femur unquestionably is best treated by the Whitman method, it can be successfully treated so as to give perfect restoration of function, as in the case of the patient who is now going out. I think we will all admit that the result in that case is extraordinary. She walked in without a limp. There aren't very many cases of fracture of the neck of the femur that are able to come in and go out as that woman did. It shows that the doctor has been successful in one case at least.

"When it comes to fractures at the intra-trochanteric line I'm not so certain that this method will be anything like universally successful. In the first place it doesn't to the same extent succeed in overcoming the shortening. Of course, I take it that all the members of the Brooklyn Surgical Society are perfectly familiar with the Whitman method and yet perhaps some of you may be a little hazy about it. He depends for the success of the reduction upon the pressure of the fragment; that is to say, the fragment of the neck which is attached to the shaft of the bone, against the lower portion of the intracapsular ligament, and, finally, the greater trochanter impinges against the muscles covering the upper lip of the acetabulum, which acts as a fulcrum, and the bone is pried into place when abduction is made as completely as possible.

"In fractures at the intra-trochanteric line I find that you do not get as good reduction when the neck itself is fractured and you do not succeed in overcoming the shortening and you do not get the same apposition when the true neck is fractured. That is the reason why I wanted the doctor to show his pictures in order that we might see the class of cases he selected, and I would like to have seen all the pictures and the results he obtained in each individual case.

"Will he tell us whether they have applied this method to the treatment of all the cases of fracture of the neck of the femur, the different kinds and different ages admitted to the hospital and also gives us statistical reports?

"I think there is no question which could better be brought before the Society and thoroughly discussed than the very important one of fracture of the neck of the femur.

"In an investigation which I made last spring in my own time I found that only a moderate number of the hospitals were using the Whitman method and, further, that the method was very imperfectly applied. I was very glad to see Dr. Watt was applying the splint and using the method. He seemed to have absorbed the idea and was working it out. I am very glad indeed that he has come here this evening even with one of his cases. I hope he will say something more about it."

Dr. John A. Lee, in discussion, said:

"I have used the Whitman method in two or three cases of fracture of the (neck of the) femur. Like Dr. Watt, I have been very pleasantly astonished at the ease with which the patients recover the function of walking, and also the rapidity.

"I understood you to say, Dr. Watt, that you put these patients under a general anesthetic. Is that right?"

By Dr. James Watt: "Yes, that is right."

"I found that it was necessary in my cases to give the patients a general anesthetic and get them completely under and spend quite some time in approximating the fragments and while in that condition to put on the cast.

"One of the difficulties which I have had is the breaking of the cast in those long spica bandages, and that creates some difficulty with the patient.

"There is only one contraindication which I can see possibly to the treatment of a fracture of this character and that is in excessively corpulent individuals. I think it might be somewhat more difficult to get the fragments in apposition and hold them there and keep the cast from breaking down under the weight."

Dr. James Watt, in closing the discussion, said:

"In regard to applying the Whitman method to all cases of fracture of the intratrochantic variety we have used the abduction method in treating that class of cases and have found the same condition that he relates—that it is not easy to overcome the shortening. If you will recall, I showed two cases of intratrochanteric fracture before this Society about a year and a half ago in which the functional result was very satisfactory, after treatment by this method.

"In regard to applying the Whitman method to all cases of fracture of the neck of the femur we have only had one case in which we considered there was a contraindication, and that was a female in the vicinity of 90 years of age, with skin that was dry and wrinkled and ulcerated in places, so that it would not stand the application of such a splint.

"I think it is quite important to realize the fact that the most recent report on this type of fracture in regard to weight-bearing, in cases treated by other methods, (I refer particularly to the Buck's extension), made by the British Committee of Fractures, shows only 22% of cases of fracture of the neck of the femur that are able to bear weight. In all of our cases we have at least secured the ability to bear weight, with the exception of one case in a woman in the vicinity of 75 yrs. of age, who had been operated for carcinoma of the breast two years previous to her injury; she was treated by Whitman's abduction method, but we were only able to keep her in a cast for three weeks owing to pressure sores. We took the cast off and completed her treatment by Buck's extension with the legs in abduction. She was visited only a few days ago by one of our staff and he tells me that she has never been able to walk. The doctor reported that this is due to some trouble with her ankle. Her hip was freely movable and not painful.

"In regard to Dr. Lee's remarks about having had trouble in putting casts on corpulent individuals. We never have had any difficulty with several cases that have been rather obese. The cast must be extremely strong and a great many reinforcements used, particularly underneath the joint, and it has been our custom in patients that are very heavy, to reinforce with strips of bass wood across the joint, in front and behind, and to put heavy reinforcements across the back and the pubis. Those patients are perfectly comfortable; they are able to move around in bed and assume almost any position desired. They can roll over without aid and they have no difficulty in getting on the bed pan. One particular point is that these fractures occur in old people and they are very prone to pneumonia and hypostatic congestion. The head of the bed can be elevated to any height in order to overcome these dangers, and it will also increase the blood supply to the fractured part.

By Dr. J. Bion Bogart: "Have you had any fatalities in cases treated by this method?"

By Dr. James Watt: Yes; we lost one case. I do not recall the exact circumstances. I also lost one case, a private patient who died a short time ago. He had a cast put on in the hospital and left, I never saw him again, but he had a large goitre at the time of his fracture and was in very poor condition when admitted to the hospital, he never really recovered from the shock following the fracture and died three weeks after the application of the cast."

Splenectomy—Splenic Anemia.

Patient, age 39 years, occupation chauffeur—referred to me by Dr. Tasker Howard.

Previous History: From the age of 5 to 18 years he had frequent epistaxis. When 12 years of age he had malaria. The spleen has been enlarged ever since. At 18 years of age he had malaria again with delirium, jaundice and melena. Crescents were found in the blood. In 1907 while feeling perfectly well, he vomited "3 quarts of blood." He was well until 1914 when he had pneumonia and delirium tremens. (He had been drinking heavily for a year.) Has been temperate since. In February, 1915, he had severe epigastric pain and vomited about a pint of blood. Then felt perfectly will until November, 1915, when after violent muscular exertion, he again vomited a large amount of blood. ("3 quarts.") Has been gaining steadily since. Skin has been brownish since malaria at 18. Yellow since last hematemesis. He complained of a lump in his side for 12 years.

Present History: On January 17th, 1916, patient complained of vomiting large quantities of blood, great muscular weakness, shortness of breath, nausea and vomiting, considerable loss of weight and a dragging pain in the abdomen. Examination: Sturdy, muscular man slightly jaundiced and somewhat pale. Enlargement of the lymph nodes some being as large as half an inch in diameter. The spleen extends obliquely down from the left costal margin across the umbilicus in a tongue, six inches across and ten inches from the costal margin to the tip. It is hard and freely movable. The liver percussess a little small. Wassermann negative. He shows a moderate secondary anemia. Blood pressure, 180-65. Examination otherwise negative.

Hemo. 45%.
R. B. C. 3,650,000.
W. B. C. 3,900.
Poly 67%.
Large Mono. 3%.
Lymphocytes 19%.
Trans. 3%.
Eosin 7%.
Mast. 1%.
Red cells—pale and irregular in size.
No plasmodia.
Vital staining, 4%.
Retic cells.

Urine contains no albumin, sugar, bile or urobolin. Stools contain bile pigments, and are frequently streaked with blood or dark colored.

Operation: January 19th, 1916. Spleen removed. There was considerable adhesions to the omentum, stomach and transverse colon at the splenic flexure and the posterior peritoneum. Specimen weighed 3¾ lbs. after the free blood was removed, measured 13 inches long, 7 inchs broad and 4 inches thick.

The second day after the operation, he complained of pain in the stomach and abdomen, the temperature going up to 102. This subsided and six days later it again ran up to 102 with some pain in the stomach and slight nausea. At the end of February, the wound was entirely healed except for a slight retraction of the skin, when a small plastic operation was done under local anaesthesia. The patient was discharged from the hospital on March 23rd in good condition. At that time the blood count was as follows:

Hemo. 60%.
R. B. C. 4,500,000.
W. B. C. 6,000.
Poly 68%.

On April 15th, I was asked to see him again with Dr. Howard at the patient's home, when he was suffering from constipation, pain in the right side of the chest and vomiting. The temperature was 102, pulse 110. He then gave the following history:

Three days before, he was taken with a chill, cough, and pain in the right side, especially when he took a long breath. On April 16th, a. m., he was again admitted to the hospital under my service and a diagnosis made of intestinal obstruction. The abdomen was opened and he was found to have a mesenteric thrombosis of all the jejunum and part of the ilium. The patient was in a serious condition and died a few hours later.

SPLENIC ANEMIA

Date	1-26	1-28	1-30	2-1	2-3
Total red cells	1610000	2310000	2100000	2050000	2400000
Hemoglobin	30%	45%	38%	36%	41%
Color Index	0.91	0.98	0.90	0.90	0.84
Total white cells	8200	8400	7900	7800	8000
Polymorphonuclears	77%	78%	79%	77%	77%
Small lymphocytes	11%	10%	9%	10%	11%
Large lymphocytes	6%	5%	6%	6%	4%
Transitionals	1%	2%	1%	2%	4%
Eosinophiles	5%	5%	5%	5%	4%
Coagulation time (Min.)........	10	7½	5	3	5

Abnormal red cells Poikilocytes/poikilocytes/poikilocytes/poikilocy/poikilocy
Megaloblasts normoblasts normoblasts normoblasts
Normoblasts
Stippling

Other tests. Wassermann, negative.
Noguchi, negative.
Meiostagmin, negative.
Antitryptic cancer test, negative.
Feces for ova or parasites, repeated examinations negative.

SPLENIC ANEMIA

February 19th, 1916.
R. B. C. 5,284,000
W. B. C. 16,000
Polys 75%
S. L. 16% (counted 200 cells)
L. L. 7.8%
Eosins 2%
H. B. 42%
Mikrocytes
Makrocytes: All present
Poikilocytes
Color index 0.4%

March 28th, 1916.
Hemo. 89%
R. B. C. 5,360,000
Leucocy 13,600
Poly 65½%
Large Mono 6%
Lymph. 20½%
Eosin 8%
Moderate change in the shape of the cells.

April 14th, 1916.

W. B. C. 21,400
Poly. 62%

Large Mono. 12%
Lymph. 23%
Eosin 2⅔%
Mast. ⅓%

I wish to thank Dr. Howard and Dr. Pacini for their kind assistance.

SPLENIC ANEMIA

Spleen—Microscopic section.

Low dry power reveals many venous sinuses which stand out as round or oval spaces, well outlined and made especially conspicuous by their comparatively empty lumen.

The capsule is thickened, and throughout, the connective tissue continuations of the capsule into the interior are also thickened and more numerous than normally.

The Malphighian follicles are quite enlarged and less isolated than usually.

High dry power shows a marginal layer of large cells, endothelial, so closely adjacent to the hyperplastic endothelium of the sinus walls as to suggest their arising from the same. Some of these cells are cast free into the lumen of the sinus and are there mixed with numerous blood-cells.

Hyperplasia of the splenic elements, accompanied by the occurrence of considerable connective tissue hyperplasia and the presence of an abundant proliferation of endothelial cells, characterizes the section.

Diaphragmatic Hernia.

Dr. James Maurice Downey.

Patient, 30 years of age, Italian, occupation longshoreman.

Previous History: Negative, with the exception of a laceration of the right arm which involved the nerve, and a stab wound on the left side of the chest which he received on October 9th, 1914.

Present History: On July 21st, 1916, he was admitted to the Hospital of the Holy Family. Five days previous he had epigastric cramps, marked on the left side below the ribs. Frequent vomiting on the following day and at night; cramp-like pains which became localized in the right lower portion of the abdomen. There were no bowel movements for six days.

Examination: Considerable tenderness over the cecum. Temperature 99.4 on admission. A Mag. Sulph. enema was given, and returned clear.

Operation: Operation was performed two hours after admission. A celiotomy was done. The appendix was found to be normal; the cecum, ascending and transverse colon were very much dilated. All the intestines were dilated. There was a hernia of the diaphragm and the splenic flexure was incarcerated and strangulated. It was impossible to reduce this hernia through the abdominal incision, so that an incision was made in the auxiliary line and the 7th and 8th ribs were resected. The splenic flexure and the omentum were found adherent to the parietal layer of the pleura. After much difficulty, the hernia was reduced and the opening in the diaphragm sutured with chromic catgut and the abdomen closed. A small drain was inserted in the auxiliary incision. The patent died shortly after the operation.

My reasons for reporting these cases are the following: *First:* The cause of his hernia was the stab wound on the side of the chest that he received two years previous, which had penetrated the diaphragm. *Second:* That all stab wounds of the chest in the region of the diaphragm should be enlarged and explored. *Third:* That all cases of injury to the diaphragm give a history of severe pain on the side of the injury, usually reflected to the shoulder on the same side. If wound is at the edge of the diaphragm, the pain and rigidity will be in the abdomen.

Patient: Twenty-three years old, America (Colored). Patient was admitted to the Hospital of the Holy Family under my service on July 24th, 1915.

Previous History: Negative.

Present History: Patient was in a fight and received a stab wound on the left side of the chest between the 8th and 9th ribs in the auxiliary line.

Examination: A fairly nourished man (colored), suffering from slight shock and a wound about three inches long, with the omentum protruding through it, on the left side.

Operation: Patient was operated upon within a few hours after admission to the hospital. Two ribs were resected on the left side of the chest and the omentum replaced; that part which was on the surface having been ligated and removed. It was found that the laceration in the diaphragm was about four inches long. This was readily sewed in through the chest incision, requiring about five sutures. The abdomen was then opened and a small perforation of the intestine closed. There was a slight hemorrhage from one of the small mesentery arteries which was ligated. The abdomen was closed and a small drain placed in the chest wound. Patient made an uneventful recovery with the exception of a slight infection of the skin wound of the chest. He left the hospital five weeks later.

Patient reentered the Hospital a year and two months later which was October 2nd, 1916.

Previous History: Negative, with the exception of operation on July 24th, 1915.

Present History: On September 28th, 1916, after eating a hearty meal, he complained of severe pain in the left hypochondriac region which was followed by vomiting of greenish material. Later in the evening he took salts, and again vomited, this being followed later by a small movement from the bowels. He was then removed to a neighboring hospital, and on October 1st was sent home. They called another ambulance and he was removed to the Hospital of the Holy Family on October 2nd. On admission, he complained of pain in the left hypochondriac region and in the right iliac region. He had hicccoughing almost continuously, with nausea and vomiting. He stated that he had been sick for five days and that two days previous to the attack of vomiting and pain, he had diarrhea and took some ginger. Since that time his bowels had not moved, so that he had not had a bowel movement in one week. He was given an enema when he came into the hospital which induced a fairly good movement. His pulse was 96, temperature 98.

Physical Examination: Heart and lungs normal, with the exception of a slight systolic murmur. There was a scar on the chest and abdomen from the former operation. The abdomen was markedly distended especially over the hypochondriac region; tense, rigid, tender and painful throughout, being more marked in the lower part, especially in the right iliac region. Patient's condition was such that he died before he could be prepared for operation.

Autopsy: He had a strangulated hernia of the ilium about twelve inches long, due to adhesions. The site of the original operation on the diaphragm showed a few adhesions around the transverse colon. The suture line held well.

Paper: "Benign Tumors of the Stomach."

Charles H. Goodrich, M. D.

Dr. John A. Lee, in opening the discussion, said:

"I think that Dr. Goodrich is to be congratulated for writing such a very laudable paper upon a subject there is practically nothing existing as far as I can make out from the common, ordinary text-books with which we come in contact. It shows that he has spent a great deal of time in investigating the literature and he has combined the different types of tumors and their treatment and the symptoms so that I do not think there is an article like it existing today. I think the society is to be congratulated on having heard such a perfect resumé of the whole subject of benign growths of the stomach.

"Notwithstanding the fact that we are receiving an increasing frequency of reports on benign growths of stomach in the literature, I think that the most of us who are doing surgery infrequently come in contact with them.

"The only addition that I can make to benign growths of the stomach is a case which I had something over a year ago, in which, unfortunately, the patient died of shock, but this case, which I wish to report, is a case that presented practically no history previous to her admission to the hospital suffering from hematemesis. The history follows:

"'Mrs. Gussie M., age 42. Family History: Father living and well. Mother dead; cause unknown. Four half-brothers and two sisters living in Europe. History of T. B., cancer, syphilis and insanity, negative. Personal history, both surgical and medical, is negative. Diseases of childhood, negative. The patent says that she has an occasional pain in the lower abdomen since the birth of her last child four years ago. She had one miscarriage six years ago. Chief complaint: Pain in the abdomen, around the umbilicus. Present illness:

Began yesterday (she was admissed to the hospital on December 15, 1915). The patient says that she got up and felt all right. About 9:00 o'clock she was feeding her children when she became dizzy and felt sick at her stomach. In a few minutes she vomited dark blood and fainted later (about a half hour). When she came to herself, she had pain in the abdomen, around the umbilicus. About an hour later she vomited more dark, bloody material. She continued to be nauseated and the pain seemed to be getting worse. There was slight tenderness over the umbilicus on palpation.'

"That was the history which we got from her on admission to the hospital. She was observed for two days and on the 17th of December, 1915, we took her up to the operating room. I will read you her operative history:

" 'The patient was anesthetized with the usual preparation. An incision was made just to the right of the median line, through the skin, fascia, muscle and peritoneum. Ptosis of all the abdominal organs was found. The stomach was explored for ulcer, but none was found. (Our preliminary diganosis was ulcer of the stomach.) A mass, about half the size of an orange, could be palpated through the walls of the stomach. When I first felt this mass I thought I had a foreign body there. I tried to push it through the pyrlorus. It seemed to be partly movable. After finding it would not go through the pyloric opening, the stomach was opened transversely and a polyp attached to the gastric mucous membranes, was discovered. The base was clamped and cauterized and then sutured with fine chromic catgut. The mucous membrane of the stomach was then sutured with Pagenstecker locked suture and the peritoneal coat sutured with a Lembert suture of the same material. Adhesions between the gall-bladder and stomach were then separated. The abdomen was further explored, but nothing was found. The fascia was sutured with chromic and the skin was sutured with linen thread.'

"You will see from the history that we didn't do very much to her. She went to the ward in a condition of shock and after living twenty-four hours, notwithstanding our constant shock treatment, she expired. We had a number of surgeons present during the operation (I think Dr. Parker, who has seen quite a considerable amount of stomach work, was present) and that was the first tumor of the stomach that any of us had ever seen, and, as I said before, in starting my remarks, I think that the Society is to be congratulated in having had such a luminous review of the whole subject of benign growths of the stomach presented to us tonight."

Dr. John H. Long, in discussion, said:

"I think that after listening to Dr. Goodrich's paper there is nothing for us to say except mention specific cases. We cannot add anything to the subject. I inquired at the Brooklyn Hospital as to how many people there had seen benign tumors of the stomach and found that no one had. I investigated the histories and none were recorded there.

"Dr. Goodrich by including linitis plastica and gumma has given me a little chance to get in on the discussion. I shall briefly mention one of each.

'A colored woman several years ago had an eight-weeks history of stomach disturbance. When I saw her there was complete pyloric obstruction. I did a gastroenterostomy. At that time the pylorus was thickened and dense to such a degree that I thought it was a carcinoma. I opened her abdomen again (a month or two later) and found that the pylorus had gone back down to normal size. I could feel a soft growth around the pyloric—sphincter. She had a positive Wassermann. I rather assumed this was a gumma. She was doing perfectly well, so it was not removed, she simply being given salvarsan and anti-syphilitic treatment. At the time of the first operation she weighed about 90 pounds. The last time I saw her, she weighed 140 pounds and she was in perfectly good health. Whether the gastroentereostomy which relieved that obstruction, did it or whether the anti-syphilitic treatment cured that gumma, if it was a gumma, I am not sure, but it was a soft growth obstructing the pylorus.

"I have here a specimen of a case of linitis plastica, which is one of the conditions included by Dr. Goodrich in his benign tumors. Dr. Andresen made a dagnosis of linitis plastica in this case. She was emaciated, dried out, and vomiting. I had two chances to see her. Something like two and a half years ago when she came in with the original condition. The x-ray showed a contracted antrum. I did a laparotomy. I will just demonstrate this specimen if anybody cares to look at it; later they may do so. This is all dense here. When the stomach was removed just the fundus here held about one ounce. The rest of it was like it is now—thickened and contracted. The first laparotomy on this woman showed a band going from the gall-bladder to the omentum pressing on the pylorus. The picture of the pylorus was that of spasm, as

I thought, showing this band passing across the pylorus and causing the spasm and hypertrophy, and on that supposition an opening was made, the stomach explored, but we found nothing—no ulcers, no growth, and the inside seemed smooth. The pylorus was open. I closed the abdomen. She got along perfectly well after this. Her first weight was 160. She got down to about 100 before the operation. She was well for somewhat more than a year and weighed 140. Two years later, Dr. Andresen asked me to see her again (she had been in the hands of some one else in the meantime), which I did, and I found that she was worse than the first time that I saw her. She had the same symptoms as before—vomiting, inability to hold anything on her stomach—any quantity. We got her into the hospital. We got some fluid into her rectum and under her skin and I did a jejunostomy under cocaine. She died the next day. This is the specimen which we got. The pathologist failed to find any carcinoma nests, which I believe are found in some of them if you search carefully enough. So far, none have been found. Dr. Andresen will report this case in detail."

Dr. Raymond P. Sullivan, in discussion said:

"In January of this year it was my privilege to operate upon a case for Dr. Rutz which proved to be linitis plastica or sclerotic tumor of the stomach. I did a sub-total gastroctomy removing about four-fifths of the stomach followed by an end to side anastomosis between the stomach and the jejunum. Whether or not this type of gastric tumor is to be classed with carcinoma, I am not fully prepared to state. However, since Dr. Long has mentioned a case I feel that it might be of interest to mention this one.

"Dr. Goodrich has made mention of this type of stomach malady as belonging to the benign tumors. It may be of advantage for Dr. Goodrich to know that Qnenu in 1908 reported two cases of 'linitis' in which sub-total gastrectomy has been done. One case lived two years and then died of hemorrhagic pleurisy, which was thought to be carcinomatous: The second case, a woman, lived two and one-half years and then died of a local return of the disease.

"My case occurred in a woman about 30 years of age, and is rather a rare type of the disease. Dr. Long's case and specimen is the average type in which there is marked constraction of the entire stomach. This case, as the photographs show, was a dilated form and is apparently very rare. On the lesser curve there was a small patch of adherent omentum from the lesser cavity and at first I considered that this was due to the recent inflammatory reaction over the ulcer. However, we could not convince ourselves that it was not carcinoma. Yet there were no enlarged lymphatics on the lesser curve or on the greater curve of the stomach. The tumor was about the size of a large orange and firm but not hard. The stomach with the tumor was freely movable. It invited resection. The pylorus was almost completely closed and uniformly thickened. Beyond the tumor towards the cardia the sclerotic area was sharply demarked and there was a normal stomach wall in the entire cardiac area. The duodenum was normal in every respect. Because of the rapid loss of weight and short history in the case we treaed it as carcinoma and did a very generous resection of the stomach.

"The x-ray pictures, taken by Dr. Wallace, showed a rather interesting diagnostic point which I shall always remember. The 12-hour plate showed an enormous retention and all plates failed to show any evidence of peristalsis and no filling defects. It seemed to me that this is a very valuable diagnostic point. Gastric analysis failed to show any blood and the acids were just a little below normal. Secretion excessive. Mucous abundant.

The pathological report of the specimen in this case, by Dr. F. A. Hulst, was 'linitis plastica.'

"Cardivilla has collected a series of 23 cases. He does not mention any gastrectomy. He reports patients alive 6 and 8 years after operation. This seems a strong argument against carcinoma, but it is my suspicion that the condition may co-exist with carcinoma or it may be independently a benign growth. One thing is sure: that the treatment is surgical. I shall always attempt removal if possible. Otherwise I shall do either a gastro-enterostomv or jejunostomy. I saw my patient today and her improvement is most encouraging. Her blood picture has greatly improved. Against advice she is eating all kinds of solid food. It was my advice for her to remain on an ulcer diet fearing that some infective process might be an underlying etiologic factor. However, she claims that she is enjoying the best of health that she has had for a long time and that she intends to make the best of it."

I feel that Dr. Goodrich has given us a most instructive and interesting paper and I personally wish to express my deep appreciation for his efforts.

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

MAY, 1917

STATED MEETING, MAY 15TH, 1917.

The President, Dr. Albert M. Judd, in the chair. There were abou 200 present. The meeting was called to order at 9:45 p. m., and the minutes of the previous meeting were approved as read.

Report of Council.

The Council reported favorably upon the following applications for membership:

Frederick Gauch, 12 Hawthorne St.; L. I. C. H., 1911; proposed by A. Potter; seconded by A. M. Judd, April '17.

David D. Jennings, 406 Ovingon Ave.; N. Y. Univ., 1886; proposed by J. C. Hancock; seconded by Membership Committee, March '17.

Chas. J. Lundbeck, 107 Bergen St.; Eclectic, N. Y., 1883; proposed by A. M. Judd; seconded by Membership Committee, April, '17.

Raffaele Muojo, 242 Tillary St.; Univ. Naples, 1896; proposed by R. W. Westbrook; seconded by S. J. McNamara, Mar. '17.

Wm. D. Scanlan, 196 Prospect Park West; L. I. C. H., 1907; proposed by S. J. McNamara; seconded by Membership Committee, March, '16.

For Reinstatement.

Reuben Finkelstein, 257 Utica Ave.; L. I. C. H., 1906; proposed by A. M. Judd; seconded by Membership Committee, March '17.

Election of Members.

The following, duly proposed and accepted by the Council, were declared elected to active membership:

Stanislaw J. Alkier, 301 Broadway; Univ. Vt., 1890; March, '17.

Hyman S. Emil, 152 Bay 16th St.; Med.-Chir., 1916; proposed by W. L. Wolfson; seconded by L. S. Schwartz, March, '17.

John N. Evans, 909 Bedford Ave.; L. I. C. H., 1916; proposed by W. A. Jewett; seconded by G. H. Reichers, Dec., '16.

Bennett G. Gerzog, 481 Stone Ave.; L. I. C. H., 1907; proposed by L. S. Schwartz; seconded by I. D. Kruskal, Dec., '16.

For Corresponding Membership.

Henry A. Geib, Woodhaven, N. Y.; Univ. & Bell., 1914; proposed by Membership Committee, March, '17.

Applications for Membership.

Applications for membership were received from the following:

S. Potter Bartley, 65 So. Portland Ave.; L. I. C. H., 1914; proposed by E. H. Bartley; seconded by Membership Committee, May, '17.

Benjamin M. Bernstein, 168 Vernon Ave., Univ. & Bell., 1915; proposed by A. M. Judd; seconded by Membership Committee, May, '17.

Alfred B. Cooke, 913 Union St.; Queen's Univ., 1912; proposed by H. A. Fisher; seconded by Membership Committee, May, '17.

Homer V. Duggan, 955 St. John's Place; L. I. C. H., 1893; proposed by T. L. Vosseler; seconded by C. H. Tag, May, '17.

Arthur C. Graves, 2823 Clarendon Road; P. & S., N. Y., 1908; proposed by A. M. Judd; seconded by Membership Committee, May, '17.

Robert Kingman, 67 Hanson Place; L. I. C. H,. 1899; proposed by R. O. Brockway; seconded by A. M. Judd, May, '17.

Joseph A. Manzella, 380-a Clinton St.; Univ. Penn., 1912; proposed by E. Bishop; seconded by W. S. Smith, May, '17.

Meyer A. Rabinowitz, 183 Vernon Ave., Cornell, 1907; proposed by L. Louria; seconded by J. Fuhs, May, '17.

Robert W. Tate, 417 72d St.; L. I. C. H., 1915; proposed by H. A. Fisher; seconded by A. N. Thomson, May, '17.

Scientific Session.

Paper: "Some Results of the Treatment of Malignant Disease by Deep Roentgen Therapy and Electro-Coagulation" (with lantern demonstrations.)

By George E. Pfahler, M.D.,
of Philadelphia, Pa.

Discussed by Drs. Lewis Gregory Cole, of Manhattan; J. G. Williams, J. B. Bogart, W. H. Wallace, M. G. Wasch, Charles Eastmond.

Dr. Russell S. Fowler, presented the following report:

From: Auxiliary Medical Committee for National Defense of Kings County in the State of New York.

To: To the Medical Society of the County of Kings:

Subject: Report of the Committee on Devising Methods of Caring for the Work of Medical Men called to the Colors.

This Committee has held four meetings. Since its inauguration by the Medical Society of the County of Kings it has been made by the Council of National Defense the Auxiliary Medical Committee for National Defense of Kings County in the State of New York, and its activities have been largely thereby increased. In reference to the work entrusted to the Committee by the Medical Society of the County of Kings, namely, the devising of mehods of caring for the work of medical men called to the colors, the Committee begs to report as follows:

(1) Under date of April 28th a letter was sent to every physician in Kings County offering the service of the Committee to those who had volunteered their services for the purpose of arranging with him or his representative such measures as would seem best to safeguard his professional interest while he was absent. The same letter endeavoed to obtain the names not only of those who have volunteered but of those who were considering doing so and asked for contributions to an emergency fund. This communication received twenty replies but few calls have been as yet made upon the Committee to arrange for the care of practice.

(2) As to hard and fast arrangements and how they are to be enforced the Committee is not yet ready to fully report except as noted under Section 4 of this communication. Important communications sent for upon the inauguration of the Committee have only been received today from the Central Medical War Committee of Great Britain and several of its auxiliary committees in different sections of Great Britain. These reports are exhaustive and seem to be of great service in perfecting our own arrangements. They will require mature consideration.

(3) The Committee would ask the following resolution be placed upon the minutes of the Society as included in this report and that it receive the endorsement of the members present and be sent to every physician in Kings County:

Be It Resolved, that the Medical Society of the County of Kings does hereby declare that it is the fixed policy of this Society to protect by every possible measure the public place and private practice of those members of the medical profession who may volunteer or be drafted into the military service of the State of New York or of the United States for any period of the present war, and

Resolved, that it will urge through the Auxiliary Medical Committee for National Defense of the County of Kings the local enforcement of such policy both relative to private practice and public and hospital appointment.

Resolved, the Society shall contenance any financial and personal agreements between members of the profession that may protect the private practice and financial returns of those members who may be drafted under conditions which the Auxiliary Medical Committee for National Defense of Kings County may deem expedient.

(4) The Committee would further request that the Medical Society of the County of Kings send to each physician residing in Kings County a communication for his signature which shall embody the following points:

(a) A copy of the resolutions as stated above.

(b) Definition as to meaning of terms used.

(1) The term "Kings County" for the purposes of this communication shall mean the area in Kings County and the parts of Counties adjacent to it in which the practitioners of Kings County practice.

(2) The term "Committee" shall mean the Auxiliary Medical Committee for National Defense of Kings County in the State of New York.

(3) The term "Practitioner on Service" shall mean a practitioner who has applied for or has already obtained a Commission in the United States Army, Navy or Marine Corps or who is engaged on Medical War Service approved by the Committee.

(4) The term "Home Practitioner" shall mean a practitioner who is engaged in civil practice within the County and who signifies his assent to the provisions of this scheme.

(5) The term "Representative" shall mean anyone, whether home practitioner or otherwise, who has been legally appointed by a practitioner on service and authorized to receive monies, sign documents and generally safeguard his interests.

(B) Arrangements for Providing Attendance on Patients of Practitioners on Service.

Any home practitioner shall, unless he can show reasonable grounds for refusing, attend patients of a practitioner on service.

C. Conservation of Practices.

(1) The attendance provided by a home practitioner on the patient of a practitioner on service shall be limited to the period of absence of the latter on service.

(2) The home practitioner shall refuse attendance on any patients of a practitioner on service, hitherto attended by him, for a period of twelve months from the date of the return of the latter to take charge of his practice.

(3) It shall be considered an obligation on the part of a pateitnt of a practitioner on service, when consulting a home practitioner, to state the name of his or her usual attendant, and it shall be the duty of the home practitioner to make certain that this is done.

D. Collection and Apportionment of Fees.

(1) Home practitioners shall keep an account of all work done on behalf of practitioners on service and shall present such accounts monthly to the representative of the practitioner on service.

(2) The monies received on account of fees earned by home practitioners for general attendance, obstetrics and operations on patients of a practitioner on service shall be paid over in the proportion of 50 per cent to the representative of the pracitioner on service and 50 per cent shall be retained by the home practitioner.

(3) Should it become necessary by reason of the enlarged number of medical men called into service that a central collecting agency be established the home practioner agrees to furnish his monthly account to such agency.

(4) The names of both the practitioner on

(Continued on page XVII)

service and the practitioner attending shall appear on all accounts rendered.

E. General.

(1) From the date of its promulgation any practitioner on service shall be entitled to all the advantages of this scheme.

(2) The scheme shall apply to salaried medical positions as well as to private practice

(3) The provisions of the scheme relating to the conservation of practices shall apply in the case of the practice of any practitioner on service changing hands on account of death or disablement or from any other cause which may be considered by the Committee to be a consequence of his service. Attendance provided for by the scheme shall continue until the practice be transferred or until such time as the Committee may determine.

(4) Except so far as is necessary to give effect to the preceding clause, all obligations shall cease six months after the return of any practitioner from service so far as concerns his practice.

(5) Before his departure a practitioner on service shall appoint and notify in writing to the Committee the name and address of a representative legally authorized to deal with all matters conneced with his practice and to assist the Committee in conserving such practice.

(6) No home practitioner shall undertake the duties of a part time appointment held by a practitioner on service, except in a temporary capacity and subject to the same apportionment of salary or fees as obtains in the case of general practice.

(7) If any dispute or difficulty shall arise in connection with any matter with which this scheme is concerned the same shall be referred to the Committee and its decision shall be final.

(8) Assent to the provisions of the scheme shall be signified by signature on the accompanying form.

Signed on behalf of the Medical Society of the County of Kings by its President and its Secretary.

Signed on behalf of the Committee by its Chairman and Secretary.

To this communication shall be attached the following:

To the Auxiliary Medical Committee for
National Defense of Kings County
in the State of New York.

Gentlemen:

I assent to the provisions of the Scheme set out above and agree to act as a "Home Practitioner" accordingly.

Signed..........................
Address ....
Date ....

(5) The Committee also asks that from its funds the Medical Society of the County of Kings make such contributions for the clerical work of the Committee as the finances of the Society will allow.

Respectfully submited,
Russell S. Folwer,
Chairman.

Auxiliary Medical Committee for National Defense of Kings County in the State of New York.

It was moved, seconded and carried that the report be accepted.

Dr. Cruikshank, Chairman of the Legislative Committee presented the following report which was moved, seconded and carried.

Whereas: Chapter 7, Section 4, of the By-Laws of the Medical Society of the State of New York, has been amended to read: "The Committee on Legislation shall consist of a Chairman to be elected by the House of Delegates, and of the Chairmen of the Legislative Committees of the constituent county societies."

And Whereas, The Medical Society of the State of New York has shown by the adoption of this amendment that it recognizes the fundamental principle that all questions on medical legislation which may affect the whole state should primarily be referred to the State Society, that attempts at handling such questions should not, as heretofore, be left to the spasmodic efforts of the unorganized few, and that what is needed for successful operation is a permanent representative organization that shall reach every smallest part of our State;

And Whereas, The plan here to be outlined has, for some time, been in operation in the Medical Society of the County of Kings, and has been found to be effective,

Therefore Be It Resolved, That the present organization of the legislative committee of the Medical Society of the County of Kings, be recommended to the County Society of each county in the state, and to the state societies of the other states.

And Be It Further Resolved, That the plan recommended be as follows: The Chairman of the legislative committee of the State Society to be chosen, if possible, from the State Capital. The legislative committee of each County Society to be so arranged that it shall always consist of a physician from each assembly district, and an additional physician from each senatorial district. The duty of the Chairman of the legislative committee of the County Society, by reason of the fact that he is also a member of the legislative committee of the State Society, to be to give to the members of his committee information coming to him, from the Chairman of the legislative committee of the State Society, to advise them in regard to proposed medical legislation that may need to be combatted or furthered, and to get from them information arising from their interviews or correspondence with the legislators of their respective districts.

The duty of the members of the legislative committees of the County Societies to be to ascertain the views or position on medical legislative matters as they arise, of the Assemblymen or Senators from whose districts they were appointed and to try to influence these legislators in favor of proper measures and against mischievous medical legisaltion.

And Further Be It Resolved, That the Medical Society of the County of Kings recommends that the machinery of such an organization be put in operation as soon as possible, believing that its use would result in successfully combatting pernicious medical legislation and furthering proper and necessary medical legislation.

AND FURTHER BE IT RESOLVED, That copies of these resolutions be sent to the president of each County Society, to the President of the State Society, to the Governor of the State of New York, to the Chairman of the Legislative committee of the State Society, to the editors of the leading medical journals, particularly of the State Journal, to the Journal of the American Medical Association, and to the President and Secretary of the American Medical Association.

Dr. Kevin, on behalf of the Committee on the Revision of the Charter, reported progress.

Dr. R. S. Robertson, Secretary of the Brooklyn Hospital Alumni Club No. 3 presented the following resolution:

A. M. JUDD, M.D.,
President Kings County Medical Society,
375 Grand Ave., Brooklyn, N. Y.

My dear Sir:

At a aregular meeting of the Brooklyn Hospital Alumni Club No. 3, held at the home of Dr. F. B. Jennings, 147 Halsey St., on May 2d, 1917, the following resolution was passed: RESOLVED: That the Secretary be instructed to write to the President of the Kings County Medical Society that the members of Brooklyn Hospital Alumni Club No. 3 favor the prohibition of the use of grain for malted and distilled liquors and the manufacture thereof during the course of the war and for one year thereafter.

It is hoped by our members that the County Medical Society will spread this report upon their records and will also take some definite stand on the matter also at its regular meeting May 15th, 1917.

Very truly yours,
R. S. ROBERTSON, M.D.
Secretary.

It was moved, seconded and carried that the resolution be laid on the table.

It was moved, seconded and carried that a vote of thanks be extended to Dr. Pfahler.

Meeting adjourned at 11 p.m.

C. R. SCOFIELD,
Secretary.

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ASTHMA IN CHILDREN III.* ITS TREATMENT.†

Fritz B. Talbot, M.D.

Boston, Mass.

THE tendency of modern medicine is to study the cause of disease and the conditions upon which pathological processes are based, rather than to burden the student with long lists of drugs with which to treat an illness. No disease can be treated intelligently without a clear understanding of the factors causing it as well as its physiology and pathology. Asthma, like other diseases, was treated empirically and symptomatically until recent advances in medicine made it possible to determine its cause. The pathological explanation of asthma applies only to a small group of cases in childhood. The great majority have to be explained by other means. After ruling out renal, cardiac, and thymic asthma, and asthma due to pressure of bronchial glands, there is left for consideration a large group of cases which commonly receive the name of bronchial asthma. It is with the treatment of this later group that the present communication is concerned.

In 1910 Meltzer (1) suggested that bronchial asthma might be due to anaphylaxis because of the striking similarity of its clinical symptoms in man to those in animals rendered sensitive by injections of small doses of protein. Before any further advance could be made in the subject a safe method of determining whether a patient was hypersusceptible to a foreign protein had to be devised. In 1873 Blackley (2) found that pollens caused a reaction on the scarified skin of individuals suffering from hay fever. The importance of this observation was not recognized or applied until recently. In 1912 Schloss (3) described skin reactions obtained with egg protein in patients susceptible to eggs. This method has been adopted by the writer and employed as follows: A linear scarification is made about one-half an inch long and only deep enough to penetrate the outer layers of the skin, care being taken not to draw the blood. An extra scarification is made as a control, since it is a well established fact that mechanical injury to the skin may result in a pseudo-reaction (an elevated white area surrounded by a small roseola), especially in patients with an "exudative diathesis." (4) The scarification is then inoculated by applying the material to be tested, preferably in fresh solution, and allowing it to remain there for twenty minutes, after which it may be wiped off. A positive reaction appears at the point of inoculation in from two to ten minutes, but in rare instances a delayed reaction may not appear for one or two hours. It may be described as an urticarial wheal with an irregular outline surrounded by a pink blush, both of these phenomena being absent in the control. In some cases the blush, without the urticarial wheal is so pronounced and characteristic that there is no question about the reaction. Itching may or may not be present. A positive reaction usually disappears within one-half to two hours. The more delicate the skin the more readily will a foreign protein pass through it, and if the patient is sensitive, cause a reaction. An infant's skin reacts very readily and even when unbroken is capable of absorbing the foreign protein in some instances. The skin test is specific and indicates sensitization to the protein tested. If the protein used in the test is free from chemicals, and, therefore, not in itself irritating to the skin, but at the same time maintaining its protein characteristics, information derived from such a test may be of the greatest aid in determining the cause of bronchial asthma.

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* Asthma in Children I. *Boston Med. & Surg. Jour.*, 1914, cxxxi, 708.
Asthma in Children II. *Boston Med. & Surg. Jour.*, 1916, cxxxv, 191.

† Read before the Medical Society of the County of Kings, March 20, 1917.

Recent studies of asthma and its allied conditions have naturally divided the causes into three different groups, which may be classified as follows:

I. Inspiratory Type due to:
- (*a*) Hay Fever—Pollens.
- (*b*) Animal Emanations
  - 1. Horse, dog & cat's hair and dust.
  - 2. Bird Feathers.

II. Ingested Type due to:
- (*a*) Meat
- (*b*) Milk
- (*c*) Eggs
- (*d*) Grains: oats, wheat, etc.
- (*e*) Vegetables: peas, beans, potato, etc.
- (*f*) Fruits: orange, banana, etc.
- (*g*) Nuts: walnut, pecan, etc.
- (*h*) Fish: salmon, etc.
- (*i*) Shell-fish: lobsters, crabs, clams, etc.

III. Bacterial Type.*

The occurrence of the different types of asthma varies with the age of the patient. Infants and young children are only sensitive to ingested proteins, such as milk, eggs and other common articles of food. This type gradually becomes less common as the individuals grow older, as there is a tendency for natural immunity to develop with age. On reaching puberty sensitization to foods either becomes relatively uncommon or the patient learns by experience to avoid certain articles of food which are apt to disagree. Inspired asthma, on the other hand, is not found before the third or fourth years of life, and becomes more common as the patient reaches puberty. Bacterial asthma is relatively rare in childhood, but becomes more common in adult life.

The following table gives the reactions obtained by the writer to foreign proteins, in a series of cases, many of which were primarily sensitive to eggs:

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* Bacterial asthma has not come into the writer's experience so far, and will, therefore, not be included in this discussion.

The treatment of bronchial asthma depends upon the type of asthma, the exposure, and the severity of the symptoms. This communication will not deal with the various drugs used during an attack, as most of them are used empirically. The various drugs and asthma powders may be used as indicated by the symptoms, with the same indifferent results obtained in the past. If the asthma is of the ingested type the bowels should be cleared out by calomel, milk of magnesia or salts. Such a procedure will remove the immediate cause of the attack and thus shorten its duration. Permanent cure can only be attained by finding and removing the cause. This may be done by means of a very careful history and the skin test described above. The pure proteins used in these tests were for the most part prepared by Messrs. Woodhouse and Olmstead, but in a few instances raw, untreated materials were used.

Inspired Asthma—A patient suffering with hay-fever may either be immunized by subcutaneous injections of the pollen extracts to which he is sensitive, a procedure not without danger except in the hands of an expert, or he may seek a locality free from the offending weed, plant or tree, thus avoiding exposure during the flowering season.

Horse Asthma—Horse asthma was a more difficult problem to deal with before the automobile came into general use. Patients giving a positive reaction to a 12 per cent alcoholic extract of horse scrapings should either keep away from horses or become immunized by a series of subcutaneous inoculations of the horse protein extract. Such inoculations may give immunity after a few weeks treatment, but unfortunately the immunity tends to be transient in some patients. One of my patients who is very sensitive to horses found that he could ride a donkey with impunity. Ths peculiarity was first observed by the parents and confirmed later by testing with 12 per cent alcoholic extract of donkey scrapings. The connection between a positive skin test to an extract of horse scrapings and asthma is often difficult to establish when the parents say that the child has not been near horses for months. In such instances the blame may often be traced to a horse hair mattress upon which the child is sleeping. Substituting a felt for the horse hair mattress is often all that is necessary to cure an asthmatic sensitive to horse scrapings. In other instances of horse asthma, the attacks come only when the wind blows from a certain direction. Careful inquiry, in such cases, often elicits the fact that there is a stable within a few hundred yards of the house, in that direction, so that when the wind blows it carries with it the secretions and hairs from the horse's skin. Under such circumstances it may be necessary to move the home to a location in which there are no stables. Two of my cases have symptoms from the dust or feathers of fowl; one becoming "stuffed up" every time he entered the chicken coop, while the other had bronchitis which was finally traced to a feather pillow. The former was cured by avoiding the chicken yard, and the later by substituting a felt for the feather pillow.

Ingested Asthma—Asthma due to foods is more difficult to deal with than inspired asthma, since it is not always easy to eliminate an article of food entirely from the diet without starving the child or making the diet monotonous.

Eggs are the commonest cause of this type of asthma. Because of their extensive use in cooking, and since minute quantities are sufficient to cause an attack of asthma, careful planning is necessary to give a child an egg-free diet. The following foods usually or always contain egg—custards, cakes, frostings, cookies, many ice creams, puddings, some crackers and macaroni. Public scepticism makes it difficult for the mother to keep eggs entirely out of the diet. One of my patients had an attack of asthma precipitated either by the carelessness or incredulity of a new cook who put some egg in the food. Another boy had a very severe attack of asthma come on in a drug store after taking a soda into which raw egg had been introduced without his knowledge.

The difficulties of keeping eggs entirely out of the diet, therefore, makes it necessary to induce an artificial immunity, according to Schloss. This may be done by giving the child minute doses of dried egg white powder in gelatin capsules, by mouth. It is necessary to introduce the egg into the stomach in capsules because if the powder comes in contact with the mucous membranes of the mouth and throat, it may cause local symptoms such as blisters in the mouth or croup. The initial dose of egg which is usually one milligram is gradually increased until the patient receives from eight to twelve grams of egg powder a day. The largest capsule a child can swallow contains about half a gram of the egg powder. By the time the dose is as high as three or four grams of egg a day, the severity of the asthma usually has diminished, the child begins to gain weight, and looks more like a normal child of its age. Immunity, which occasionally is permanent, is established when the skin test becomes negative. After the immunizing doses of egg are omitted, however, the symptoms and a positive skin test are apt to return. It is better, therefore, to continue the capsules for some months and perhaps years after the immunity has been attained. The usual technic is to give the maximum immunizing dose during the first week of every month for at least one year after the child is immune.

The following case is an example of a child successfully treated. Case 9, E.H.: Girl of eight years. She began to have bronchial colds when about two years of age which later developed into typical asthma at four years. Since then she has had asthma off and on, never going more than six to eight weeks without an attack. The first egg was given between twelve and eighteen months causing blisters to come out all over her, and making her feel miserable. Since then the mother has tried to keep egg out of the diet. She first came to the office on October 5th, 1914 and gave a positive skin reaction to egg, measuring 22 x14 mm. Immunization was started by giving Merck's egg white albumen in capsules, one milligram in a capsule. She was at first given one capsule a day, increasing one every day or two, until she received ten a day. After one month the dose was increased to five milligrams and on November 23d, 1914, to fifty milligrams, two a day to ten a day. December 24, 1914, the skin test was positive and measured 12 x 7 mm. The capsules were then strengthened to two hundred milligrams, two a day to ten a day. The treatment caused no symptoms. She had had a cold for a week, the first one she ever had without asthma.

February 4th, 1915, four months after immunization was commenced, the skin test measured 8 x 4 cm. The dose was then increased to five hundred milligrams.

February 23d, 1915, she had a cold with fever but no asthma, and it was necessary, however, to reduce the dose of the egg capsules during the fever.

March 24th, 1915, the mother reported that the child was "all right in every way and has had one or two slight colds without asthma. She can do more this year than ever before and is able to run without getting wheezed up." The skin was scarified in the usual manner and egg applied which gave a negative test in twenty minutes.

At this time I considered that the child was "cured."

On June 1st, 1915, reported that she had been given no egg powder for two months but that she had taken hard boiled eggs, four or five times a week. The asthma had returned and with it the skin test, the urticarial wheal of which measured 8 x 13 mm., and the roseola 3 x 4 cm. Other foods tested at this time were negative. The dose of egg was quickly increased, and although on August 12th the skin reaction measured 1½ x 2 mm., she continued to have some asthma. By October 15th the skin test had gradually diminished in size and there was only a slight elevation around the incision. She had gained 4½ pounds from November 23d, 1914, to October 15th, 1915, when she weighed 72¾ pounds.

In January, 1916, the father reported that she was more robust than she ever had been and was eating a hard boiled egg a day, as well as other things with eggs in them. She likes hard boiled eggs, but soft boiled or scrambled eggs tickled her tongue. During the winter she had no asthma but the following spring she had asthma which started after the snow left. She was then advised to commence the egg powder again, using gradually increasing doses. The skin test was still positive. After this the asthma disappeared and she was taking enough egg powder to cover a fifty cent piece, three times a day. Her appetite improved. In August of this season she was eating the white of an egg a day and sometimes the yolk. The skin test to egg gave a reaction the size of a five cent piece. The immunizing doses of egg were discontinued for a time but the child continued to eat hard boiled eggs. This, however, was not found to be sufficient to maintain her immunity, so egg powder was again commenced in increasing doses. Her last report, January 25th, 1917, was that she had had no asthma since the summer and is stronger than she has ever been before. Although the child might have been outgrowing the asthma naturally during the time she was under treatment her marked and rapid improvement during the course of immunization was enough to make this very improbable. Similar experiences with other cases in which artificial immunity to egg brought relief from the asthma in the course of a few months is confirmatory evidence that active de-sensitization is an important method of treating asthma.

Beef Juice—Idiosyncrasy to beef juice or the other meats is handled by excluding the offending meat from the diet. Fortunately idiosyncrasy to beef juice tends to cure itself in a few months without treatment if it is omitted from the diet. Beef juice was the cause of asthma in four of my cases.

Vegetables—Idiosyncrasy to the vegetables but more especially to the grains is difficult to treat because if all the grains are excluded from the diet it is almost impossible to give enough carbohydrate for a well-balanced diet. High heat (5) however, destroys some of the anaphylactogenic properties of the grains, and in some instances shredded wheat biscuit may be tolerated when cream of wheat causes symptoms. In most cases it is better to exclude the offending food entirely from the diet. Biologically the vegetable proteins are closely related to one another, so that a child who is sensitive to the protein of the string bean will often react to the other members of the bean family, that is, the lima bean, pea bean, black bean, etc. The same is true of the grains, wheat, barley, oat, rye, rice, etc., which belong to the grass family. When positive reactions are obtained from the seeds of the grains, the pollens of the grasses may also react. For instance, it is not uncommon, as Goodale has brought out, to find that a hay fever patient, sensitive to the June and Timothy grass, also reacts to the protein of wheat grains. Group or family reactions, however, are not always the rule, as some individuals react to only one member of a family.

Milk—Milk forms such an important part of a child's diet that it is very difficult to exclude it entirely. In some individuals to whom raw milk is a poison, boiled milk or butter-milk may be taken without symptoms, while in other instances goat's milk may be given with good results. Sometimes it is necessary to produce immunity to cow's milk by giving drop doses of milk, gradually increasing the amount and obtaining immunity in the manner described above for eggs.

The remaining foods, fruits, nuts, fish and shell fish will not be missed, if they are excluded from the diet.

Results—The cases reported above have been under observation for varying lengths of time, and some of them are still in the process of immunization, so that it is impossible to state the final results of all. It should be remembered that asthma in children tends to cure itself without treatment. This has been the history of six children, not included in this report. The writer considers a case "relieved" that had been having frequent attacks of asthma and, who, after being immunized to the offending protein, goes for six to twelve months without an attack. The patient, however, may still have hay fever or horse asthma. The longest cure, Case 3, has been three years without asthma. A case is much improved which has gained weight and strength and instead of having attacks which last three to seven days, is only slightly upset for one day. Unsuccessful cases are those in which nothing has been accomplished.

The 28 cases reported showed the following results:

Relieved—13 cases
Improved
  Much Improved—5 cases
  Slight Improvement—3 cases.
No Improvement
  With treatment—4 cases
  Without treatment—3 cases.

REFERENCES.

(1) Meltzer: *Tr. Assoc. Am. Phys.* 1910, xxv, 66.

(2) Blackley: Exp. Researches on the Cause and Nature of Hay Fever: London, 1873, quoted from Longcope.

(3) Schloss: *Am. Jour. Dis. Children,* 1912, iii, No. 6, 341.

(4) Schlutz: *Jahrb. f. Kinderh.,* 1913, xxviii, 347.

(5) Vaughan: Protein Split Products, Phil. & London, 1913.

Longcope: The Susceptibility of Man to Foreign Protein: *Am. Jour. Med. Sciences,* 1916, clii, 625, gives a complete and exhaustive summary of what is known up to date and should be consulted by those interested in the subject.

TABLE I.

No. of Case	Sex	Inspired		Ingested						Bacterial	Remarks
		Animal Emanations	Pollens	Animal Foods	Eggs	Grains	Vegetables	Fruits	Nuts		
2. A.H.	M.	Horse H. + Hen's Feathers +	0	0	+	Wheat ? +	0	0	0		No improvement. Treatment tried but omitted.
3. T.G.	M.	Horse H. +	Ragweed +	0	+	0	0	0		0	Cure.
4. R.M.	M.				+						Cure.
5. F.I.	M.	Rabbit + Horse H. 0	Astor + Timothy Grass + Dandelions +								Cure. No asthma Still has Hay Fever.
6. E.B.	M.				+						No improvement with treatment. Impossible to immunize.
7. J.B.	M.				+						No improvement.
8. P.L.	M.				+						Seen only once. Reports—taking egg daily 5 Asthma, Eczema or Hives.
9. E.H.	F.	Cat S. + Horse S. + Dog S. +			+	0	Cocoa +		?		Cure.
10. C.B	M.	0			+		0		+		Much improved.
11. W.C.	M.	Cat's Hair + Horse Hair + Dog's Hair 0			+	Wheat + Rice + Oat ?					Cure.
12. A.T.	F.	Cat's Hair + Donkey " + Sheep " + Horse " 0		Cow Casein ?	+	0			0		Cure.
13. S.S.	F.	Horse Hair + Cat's " 0 Dog's " 0 Donkey " + Hen's Feathers 0		Beef Juice + Milk 0	+	Oat ? 0 Wheat ? +	Pea 0 Spinach ? Cocoa ?		0	0	Much improved.
14. L.S.	F.	Horse Hair + Cat S. + Sheep S. + Goat S. +		0	+	Rice ?		0	?		Cure.
15. J A.	M.				+				+		Cure.
16. T C.	M.	Horse Hair + Dog's " sl +		Cow Casein 0	+	0			0		Cure to egg. Still has wild attacks from horses.
17. C.G.	F.			Cow Casein 0 Beef Juice +	0	0					Cure by omitting beef from diet.
18. M.H.	F.	Dog's Hair + Horse " + Donkey " 0 Cat's " 0		Beef Extr. ? + Cow Casein ?	+	Oat ? Others 0	Peanut + Bean 0 Pea 0		+		Cure or much improved.
19. B K.	F.	0		Beef Juice + Milk +	0	Wheat + Rice 0 Oat 0	0		+		Slight improvement.
20. P.W.	M.	Horse Hair + Hen's feathers 0		Milk 0	+	Wheat + Rice 0 Oat 0	B. turnip + Potato sl. + Pea 0 Bean-0	Banana sl. +	+	0	Cure.
21. E.B.	F.	Horse S. ? Dog's Hair ?		0	+	Rice + Wheat +	Soy Bean ? Lima " + Green Pea + Kidney Bean + Cal. " + Black Bean +		+		Much improved.
22. E.B.	F.	Horse S. 0			+				?		Not healed.
23. T.R.	M.			Cow Casein sl. + Beef Juice +	0	0	0		0		Seen only once. Nothing heard about results.
24. S.A.	M.	Horse Hair + Donkey " + Hen's feathers 0		Cow Casein ? +	+	0	0	0	0	0	Sl. improvement, became tired of capsules and stopped taking them.
25. C.T.	M.	Horse Hair 0 Donkey " 0 Hen's feathers ? +	Corn +	0	0	Rice +	Bean sl. + Pea sl. + Spinach + Potato + Squash +	Banana + Peach ? +	0	0	Sl. improvement.
26. R.C.	M.	Horse Hair ? Dog's " 0 Cat's " 0 Hen's feathers 0			+	Oat + Wheat +	0				No improvement.
27. E.H.	M.	0	Timothy Grass + Corn + Barley + Ragweed +	0	0	Rye + Wheat + Barley + Oat ? + Rice +	Celery + Turnip + Tomato + Cocoa + Corn + Pea + Cauliflower +	Banana + Apricot + Dates + Apple + Peach + Cantalop +	+		Much improved.
28. D.W.	M.				+						Cure.
29. L.S.	F.	Horse Hair +		0	+	Rye + Rice 0 Wheat 0	0	0			Not treated. Seen only once.

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THE RATIONAL INTERPRETATION OF BLOOD PRESSURE.*

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WE are prone in an intense desire to afford relief to those suffering from disease, to overlook the fundamental underlying principles which govern its clinical phenomena, in endeavoring to relieve distressing symptoms, by methods which are neither logical in conception, nor ultimately beneficial in results.

What the laity wants is relief; and it is often mandatory upon the doctor to give it as quickly as possible.

It requires courage to say "no" to people who are suffering and tact to conduct treatment in a case, where, in the nature of things, some time must elapse, before much can be accomplished.

There are no conditions of which this can be more truly said than in high blood pressure. The physician and his patient are often taxed to the limit of endurance with a relatively poor outlook in the last analysis.

The treatment of arteriosclerosis and other conditions yielding hypertension necessitates exact knowledge of their genesis; and this cannot be had without as clear an understanding of the anatomy and function of the circulation as modern science affords.

It would be an act of supererogation to review such a subject before this body; but there are a few of the newer facts which may not be out of place here, especially as they may serve to refresh our memories and put us in better position to comprehend the pathology of high blood pressure.

It would be impossible, even in a series of evenings, to cover anything like all of the ground which has been gone over in recent times; and it is the purpose of this paper to discuss one aspect of the subject, which seems to the writer to be very fundamental and at the same time of considerable practical importance.

In the consideration of the anatomical and functional questions involved, the recent brochure of Hasebroek upon the extracardial circulation has been freely drawn upon and due acknowledgment is herewith made.

The cardio-vascular apparatus owes its origin to metabolism.

Metabolism is the driving force for the functional activity of the circulatory system. All forms of life give evidence of this fact. As the lower forms are succeeded by the higher, means are provided, through the establishment of the circulation, for carrying on the chemical processes necessary to cell life in its more complicated environment. This is seen in the gradual development of vascular channels, from the simple posterior vessel of some species of worms which are provided with a posterior vessel, composed of circular and longitudinal coats of smooth muscle fibers, which contracts rhythmically, forcing blood in one direction into the worm's stomach, to the elaborate vascular mechanism of the higher vertebrates.

Metabolism in the higher animals, including man, determines the velocity of the blood current by the process of osmosis and the influx of oxygen and the efflux of carbon dioxide in adequate quantity to and from the protoplasmic cells. Plesch's investigations (quoted by Hasebroek), have demonstrated this to be true in man.

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* Read before the Brooklyn Pathological Society December 14, 1916.

Osmosis is a result of metabolism in the cells and is made possible by the velocity and pressure in the capillary circulation. Alterations in these beyond physiological limits interfere with both metabolism and osmosis.

According to Hasebroek, the capillaries have the power of more or less rhythmic calibration, partly as a result of the contraction of tissue cells around them, partly through contraction of the endothelium of the capillaries. This phenomenon of calibration is the result of two factors, *i. e.,* vitality and function. This calibration and the velocity of the blood current are governed by the activity of the protoplasmic cells, in other words, metabolism.

With the phylogenetic ascent of the developmental series of living beings, the advent of smooth muscle fiber is of prime importance for the formation of the circulatory system.

The fact of its persistence from very primitive forms up to the highest and the further fact, that, in earlier forms, where the circulatory apparatus consists of a single vessel, the muscular contraction is always in the same direction, thus maintaining constancy of current in one direction, these facts are *prima facie* evidence of a similar function for the muscular coats in human blood vessels. In other words, aside from the propulsive action of the heart in systole and the elasticity of the blood vessels, similar muscular activity to that in the muscular vessel of the worm can be postulated (as Hasebroek puts it—and we think he is right), for the arteries of man. Hasebroek says: "The possibility surely exists that, in the arterial system an immanent and reactive diastolic-systolic motion is transformed into some kind of independent peristaltic action, under the influence of a current wave proceeding from the heart." His idea is that the arteries have the power to force the blood to the periphery by a peristaltic action which is independent of the heart.

Speaking of the relation of the protoplasm to this activity of the arteries Hasebroek further says:

"In the normal circulation, the immediate necessity for a definite velocity of current in the peripheral capillaries is biologically a definitely determined fact. At the periphery, everything turns to the immediate securing and maintaining of this velocity, which determines the intensity of flow from the capillaries into the veins. The degree of filling of the veins is less than the intensity of flow or pressure from the capillaries.

"In this to and fro current in the protoplasmic area (periphery), in which no cardiac rhythm is seen, we have to regard the influx of blood in the rhythmically acting arteries as a most essential factor.

"Since the power of the arterial influx depends as well upon the velocity as the force of the current, we have to assume in the kinetic components of the rhythmic arterial diastole the function of definite calibration of the arteries in which arterial musculature is present and fully developed.

"Tonus is not to be regarded as simply the stationary condition of tension; but arterial diastole and systole must be taken as a to and fro pendulum between two rapidly and rhythmically changing muscular contractions. Thus we have for the arteries as for the heart, a form of stroke volume.

"When we combine the events of the rhythmic vascular contractions with lumen calibration, to make a total function, we fulfill the mechanical conditions under which an effectual independence of the extra-cardiac circulation is attained.

"The determination of the relation between the capillary drive in the protoplasmic areas and the influx drive of the conveying arteries is of prime importance." In other words, Hasebroek believes, and with good reason, that the arteries possess a driving force of their own, independent of the heart drive, which bears definite relation to the drive in the capillaries, which is influenced by osmosis. As proof of this he quotes Natus' observations: "That in the pale, resting pancreas the artery is almost stationary, whereas in the red active condition of this organ it pulsates." Homberger (quoted by Hasebroek), says in this connection: "Of the four cardinal symptoms of inflammation: Rubor results from the marked filling of the vessels, calor from an abnormally great velocity of the blood current in the inflammatory area." The point being that these phenomena are resultant from the muscular mechanism of the arteries; that calor is not resultant from abnormal heat production, but by increase of current has been experimentally determined. Redness is the first symptom of inflammation and results from increased volume of current; it is due to the necessity for an increased capillary velocity on account of increased cell metabolism.

"Observation of the surface of a local inflammation of the skin or mucous membrane shows that the visible part of the area has a light scarlet red color. Since it is not possible to produce a livid blue color by means of cold in this florid stage, as otherwise occurs in tissues rich in blood, it is evident that the energy of current (in the inflammatory reaction) is greatly increased and highly important."

Thus, like Hasbroek, Homberger believes that metabolism of the protoplasmic cells dominates the circulation of the blood, both in volume and velocity of current, by their metabolic processes.

"It results from all observations, that quickening of the blood current is the first manifestation of protoplasmic activity and slowing first appears, when the vasomoter mechanism is destroyed by the cessation of vitality of the protoplasm. This is of great importance, for it is directly related to the behavior of the body cells and vessels and hence blood pressure under the influence of toxines. The pressure in the smallest veins is shown to be less than in the capillaries; thus we have a place of least resistance in the beginnings of the veins which makes the forward drive into the veins possible with a minimum force in the capillaries. The lateral pressure in the small veins is notoriously so slight, that they do not spurt when cut; the pressure is perhaps definitely negative."

Hasebroek regards the higher absolute pressure in the large veins as due to actual local reaction in the venous walls, particularly at the valve sites. This, of course, is muscular.

In other words, there is a forward drive in the venous system, just as in the arterial and capillary systems—which must be regarded as extra-cardial.

There are certain signals by means of which the organism sets in motion the arterial drive from the smallest peripheral arteries to the heart itself.

No less an one than Pflugger, in his Law of Teleological Mechanics, has given to us the right of generalization of the processes under discussion. Formulated this law says:

"The cause of the necessity of a living being is at the same time the cause of the satisfying of that necessity. When the necessity comes to only one definite organ, that organ alone induces satisfying of the necessity. When the same necessity comes to many organs simultaneously, one organ very commonly induces satisfying of the requirement for them all." Hasebroek further says:

"The investigations of recent times, with the discoveries of internal secretions, begin to show us the way to an understanding of the mechanical principle of satisfying organic necessities. We know pretty certainly that in every organ and tissue of the body certain regulatory influences inhere, by virtue of their specific products, which are distributed by the circulating blood. The blood itself contains prime and distinctly effective potencies, which are surrounded by the circulatory apparatus through its walls and motor parts." Here is sensed the relation of certain hormones in the circulating blood which act directly upon the vascular coats and possibly nerves.

"Hypotonic solutions increase the intensity as well as the velocity of rhythm of the vertebrate heart and must also produce the same effect upon the regulating mechanism of the blood vessels."

"There are direct products of metabolism which, both qualitatively and quantitatively establish an immediate connection between peripheral organs and their vascular systems."

According to Bayliss and Starling, there are chemical products of metabolism, which, in the course of phylogenetic development have produced the so-called Hormones, and the results of investigation tend more and more to the certainty that these hormones contain hemodynamic properties to a high degree. The action of the hormones effects correlations which are nowhere more striking than in the circulation. They act as messengers to notify various segments of the circulation, which have necessities as a result of use, with the aid of definitely arranged depots. He refers to the vaso-motor nerves.

"Everything indicates that this action occurs up-stream in the arterial system towards the heart, by steps in a certain sense, by increasing the irritability of the (contractile and nervous) elements in the vascular wall."

Thus the hormones act as regulators of the velocity of the blood current in the periphery, and this action is directed from the periphery to the heart, being called forth by the necessities of metabolism in the cell territories.

It is easy to reason out the relations of these hormone actions in acute and toxic conditions of the body as well as their effect upon blood pressure.

Once having a clear mental picture of the action of these vascular controls, one would hesitate to tamper directly with the blood pressure in a given case.

Vaso-motor calibration is also under the control of a delicate nervous mechanism whose nerve fibers emanate from the cerebrospinal and sympathetic nerves.

From all this we find that the cardio-vascular apparatus comprises:

a. The heart, which is the prime motive power of the circulating blood.

b. The arteries and arterioles, which have a diastolic-systolic action and continue the drive of blood towards the peripheral capillaries.

c. Capillaries, which possess rhythmic contraction and in which, by virtue of their proximity to the cell territories and the phenomena of osmosis, the regulation of the entire current velocity inheres, as an end result of cell metabolism.

d. The vaso-motor nerves, which, under the probable influence of the hormones regulate vascular calibration and thus the current-drive.

e. The veins which also are supposed to possess a drive of their own, by contraction of muscular fibers in the direction of the heart.

Here is a very wonderful mechanism, which acts to promote the nutrition and metabolic processes—functions—of the body cells and, at the same time, to assist in the throwing off of noxious elements in the tissues.

It is difficult to comprehend how any really intelligent conception of the nature of blood pressure can be had, without a clear mental picture of this mechanism.

With such a picture the interpretation of blood pressure becomes at once easier and more rational; and efforts to treat the pathological forms of so-called hypertension will be more scientifically directed.

It is a prime function of the heart and blood vessels to maintain the balance between the velocity of capillary blood current and cell metabolism. Clinically this is evidenced by the pulse rate, body temperature and blood pressure.

Any impairment of the cardio-vascular function will show itself in the pulse, temperature and blood pressure. Shock, by inhibiting cardio-vascular action, will reduce blood pressure. On the other hand, marked disturbance of metabolism in the peripheral cells must certainly modify the function of the circulation.

Severe toxemias, which threaten the vitality of protoplasm must call for an immediate increase in the velocity of current in the capillaries, which increase will be accomplished by increase in blood pressure, as a result of changes in the requirements for osmosis. If the drive be not sufficiently increased the cell protoplasm will be in imminent peril of destruction.

The first effect of toxines upon the body cells is to stimulate their metabolic processes: this necessitates increase of blood flow to the capillaries to meet the demands of osmosis and remove the toxines. To accomplish this vascular tonus is increased and cardiac action more energetic.

The increase of vascular tension and cardiac impulse gives rise to increase in blood pressure, which may become alarmingly high; but this hypertension is compensatory and conservative; and it is debatable whether efforts should be directed to its reduction *per se*. It seems perfectly clear to the writer, that the real and perhaps only methods properly used for the reduction of hypertension in the acute toxemias are their neutralization and elimination.

With the increase of vascular tension and cardiac impulse pressure rises and, if all goes well, is maintained until the toxine is successfully eliminated; otherwise the cell protoplasm will be swamped, metabolism will cease, the capillary drive will stop, the blood vessels dilate, blood pressure falls, and death ensues.

We have all seen it happen and have been struck with the remarkable behavior of the subcutaneous vessels, as they dilate with paralysis and produce areas of erythema.

The fatal pneumonias offer a striking example of the action of the acute toxemias upon blood pressure. The physician strikes a balance between pressure and pulse and, as the former sinks and the latter rises, he is clinically checking up the drive in the peripheral capillaries and the balance between it and cell metabolism.

Abderhalden says: "A regular undisturbed course of the manifold cell processes presupposes that constant relations (between blood supply and cells) are guaranteed within certain limits."

"The cell works as already described, always by steps. It cannot destroy a complex molecule with one stroke and immediately convert it into end-products through combustion.

"In case foreign material which is inimical to the body (cells) comes to be dissociated (by the cells) many intermediate substances are formed, which produce severe disturbances." Here he is thinking of bacteriolysis and the liberation of endotoxines.

"In making these reflections, one cannot think only of purely chemical processes: physical processes also play an important role everywhere. Every cell possesses material having an influence upon osmotic pressure."

This is very important in its bearing upon blood pressure; for, as has already been stated, osmosis determines the capillary drive, which cannot be increased without producing a definite effect in calling upon the arteries and heart for more work, which means more pressure. This is not a theory: it is a definitely demonstrated fact in physiological and physical chemistry.

One has but to contemplate the enormous amount of peripheral tissue in the body and its concomitant capillary blood supply to realize, that any appreciable change in the velocity of the current must be felt by the general circulation.

The human tissues are commonly subjected to the influence of toxic materials, some of which are very intense in their effects, while others are rather the reverse; but they all affect cell metabolism and therefore osmosis.

Some of the toxines are reputed to produce permanent change in the structure of the heart and blood vessels themselves, so that by degrees their function is modified; and this may progress to such a pass, that the heart is obliged to take up extra work, in order to maintain the velocity of the capillary flow.

It is believed that auto-toxines, bacterial toxines, etc., produce metabolic changes which require constant, but moderate changes in osmosis, which bring increased demand for work upon the arteries and arterioles, which in consequence slowly hypertrophy and then degenerate. The muscular coats are hyperplastic at first and then become replaced, to a greater or less extent, by fibrous tissue. At the same time they contract and become stenosed and rigid.

It is in these cases that the clinician sees the gradual but steady rise of blood pressure. If the condition be early recognized and its cause removed, there is some hope of at least arresting the progress of the case. But when the anatomical changes are well marked, the condition is permanent and there is nothing to do but reduce the toxines, if possible, and decrease the viscosity of the blood.

The use of cardiac depressants and vaso-dilators in these cases is a doubtful procedure at best and in some of them very dangerous. It must ever be remembered, that somatic cell life cannot be maintained without the capillary drive and that, as has already been stated and must now be emphasized, increased blood pressure is here conservative and compensatory.

The writer recalls a case in which the systolic pressure oscillated between 190 and 230 where the nitrites were pushed, until the systolic pressure fell to 140 and the diastolic to 70. This made a pulse pressure of 70 and a heart load of 100 per cent. The patient, a man 49 years old, suddenly developed a left hemiplegia. He had a very highly developed general arteriosclerosis. His retinal arteries showed the condition to an exquisite degree. As far as could be determined, he had a thorombosis of his circle of Wills, which we have always felt was due to the lowered blood pressure, in vessels which were not only rigid, but stenosed and roughened.

The question as to the nature of arteriosclerosis has been very variously answered. It has long been disputed as to whether the process is degenerative, or inflammatory and whether the intima or media is first attacked. There is still difference of opinion; but the majority of opinion favors the intima.

One of the best conceptions of the pathogenesis of arteriosclerosis is found in Kauffmann's[3] Lehrbuch Der Speziellen Pathologischen Anatomie, Erster Band Vi Anflage 1911 and it seems to the writer to harmonize with the vascular theories of Hasebroek. Kauffmann says: "If we proceed from the physiological thickening of the intima in the growing organism, we must see in it, as Fuchs has brought out in an interesting manner, the expression of a physiological accommodation. The increasing quantity of blood necessitates a strengthening of the wall, whereby the necessary tension in the vessel will be guaranteed for the normal course of the circulation. This strengthening occurs through thickening of the muscular media and growth of the elastic tissue of the intima; and the last factor can produce heightened tension, up to a certain maximum, through long years as well as greater taxation. If the possibility of further accommodation be exhausted, usually towards the end of 4th decade, when arteriosclerosis as a rule sets in, and if the elasticity slowly diminishes, in consequence of persistent overstretching, wearing out, we find a transient compensation through formation of connective tissue, which, through its high rigidity sustains the wall of the vessel; but this compensation does not last, degenerative processes (fatty, hyaline), are established in the thickened intima—we have arteriosclerosis.

The view is gaining ground that arteriosclerosis is due to abnormal functional taxation of the arteries. Romberg denominates it a "wearing out disease."

Cardiac hypertrophy can induce arteriosclerosis of both the aorta and pulmonary artery. It is produced by heavy manual labor, wood sawing, and is seen in longshoremen, athletes, etc.

More recently there is a category of etiological factors, which includes nutrition disturbances and toxic and infectious influences: typhoid, scarlet fever, measles, diphtheria, possibly hyperadrenalism, auto-intoxication from the intestinal canal, metabolic disturbances, gout, diabetes, obesity, etc.

Nonspecific inflammation of the arterial wall, with new formation of connective tissue and elastic fibres, is very common and is found primarily in the inner and middle coats. Vascular obliteration may occur.

Kussmaul and Miaer have described an arterial change, which they denominate periarteritis nodosa, in which small nodules and aneurysms develop. This type attacks the smaller arteries and may cause complete occlusion of their lumina.

Whatever the variety, whether it be arteriosclerosis, arteritis productiva, periarteritis nodosa, or the tubercular or syphilitic form, two things are certain and must be emphasized: First; the wonderful extracardial vascular mechanism, described by Hasebroek, will be put out of commission wherever these changes occur and the vessels will be left in a more or less rigid condition, with an irregular inner surface. Second; as a result of the rigidity, roughness, and stenosis of the arteries, all of which produce obstruction to the flow of blood, the velocity of current in the capillary areas will suffer.

When the vascular obstruction extends over a sufficient area of the circulation, the demand upon the heart is such as to cause hypertrophy of the left ventricle. This hypertrophy is not simply, or even primarily due to the vascular obstruction; the real dynamic force, which urges the heart to act is the requirement of the peripheral cells for sufficient velocity of current in the capillaries, in order that metabolism and osmosis may be properly maintained.

Blood pressure therefore rises to compensate the lesions in the vessels, which have lost their tonicity, are rigid and narrow. One of the most striking examples of this condition is the arterio-sclerotic kidney. Here, in the slide on the screen, it can readily be seen, that the cortex of the organ has become atrophied in spots; and when we come to examine the microscopic sections, it is not difficult to discover the cause of the atrophy, nor to reason out the fact, that somatic cells are destined to die, when their blood supply is cut off to the extent seen here.

Too great stress cannot be laid upon the fact that hypertension is always compensatory and conservative. It therefore requires careful consideration, and the best of judgment, before a decision is made to attempt to interfere with nature's processes by lowering a high blood pressure.

It must not be forgotten, that the degree of vessel damage is not always the same in the different parts of the circulation. While it may be relatively moderate in one section, it may be so extreme in another as to make it unwarrantable to reduce the blood pressure.

On the other hand, it is a not uncommon experience to note a fall in blood pressure after the exhibition of cardio-vascular stimulants. If the drive to the periphery be not sufficient to maintain adequate velocity in the capillary districts, there will be a tendency to stasis in the capillaries: if now the drive be increased, by stimulating a myocardium which is flagging under its abnormal burden, this stasis will disappear and pressure will fall. In any event, this has seemingly been our experience, and it appears logical.

There is probably another cause for hypertension which, while it may and evidently does obtain in individuals having arteriosclerosis, may also occur without marked vascular changes, at least of a general nature. We refer to retention of the nitrogen rest. William W. Cadbury,[4] in a very valuable contribution from the Peter Bent Briggam Hospital, analyzed 305 cases in the wards, whose systolic pressure showed at least one reading of 160 m.m. mercury pressure or over, and in whom at least two tests were made. Cadbury has tabulated some very interesting statistics, which seem to show direct relations between elimination and blood pressure. The lantern slide shows Table I, which speaks for itself. There is a striking decrease in the phenolsulphonephthalein output as the tension rises.

TABLE I—PHENOLSULPHONEPHTHALEIN EXCRETION AND SYSTOLIC AND DIASTOLIC PRESSURE.

Phenolsulphonephthalein Reading, %	Number Cases	Average Systolic Pressure, Mm.	Average Diastolic Pressure, Mm.
1	29	196	117
1 to 10	15	194	119
11 to 20	25	180	108
21 to 30	33	192	112
31 to 40	43	185	112
41 to 50	40	177	106
51 to 60	39	178	77
61 to 70	14	169	94
71 to 89	6	158	89

In Table II the lantern slide reveals a record of 75 cases in which the blood urea nitrogen was estimated. Here again is a gradual increase in both systolic and diastolic pressures as the blood urea nitrogen retention increases. He remarks that "this is especially notable in the diastolic pressure, which shows a more constant rise than the systolic. This may be due to other complications influencing the systolic pressure, as the intoxication becomes more profound and interference with cardiac function more pronounced."

Maximum Diastolic Pressure from 101 *to* 120 *m. m.*—Of the 100 cases in this group, fifty-six were diagnosed as chronic nephritis.

TABLE 2—THE BLOOD UREA NITROGEN COMPARED WITH THE AVERAGE SYSTOLIC AND DIASTOLIC PRESSURES.

Blood Urea N, Mg. per 100 C.c. Blood	Number Cases	Systolic Pressure, Mm.	Diastolic Pressure, Mm.
1 to 20	20	187	106
21 to 30	14	194	110
31 to 40	13	208	115
41 to 60	11	186	119
61 to 100	10	187	114
101 to 253	7	211	132

In 56 cases having a maximum diastolic pressure from 101 to 120, in which a diagnosis of chronic nephritis was made, the phenolsulphonephthalein output was as is shown in the next table. In 87 cases

No. Cases	Phenolsulphonephthalein, %
3	No record
4	0
7	1 to 19
24	20 to 40
18	40 to 61

in which the patients gave very definite signs of chronic nephritis, with albuminuria, hypertrophy of the heart and uremia, with maximum diastolic reading from 121 to 150, the 'phthalein output was as shown in the table following:

No. Cases	Phenolsulphone-phthalein, %
17	0
7	1 to 10
18	11 to 30
17	31 to 40
13	41 to 50
15	51 to 62

In 27 cases with maximum diastolic pressure from 151-170 there were definite signs of chronic nephritis, with cardiac hypertrophy. The phenolsulphone test was performed in 25 of the cases with results as shown in the table.

No. Cases	Phenolsulphone-phthalein, %
4	0
2	1 to 10
4	11 to 20
10	21 to 40
4	41 to 50
1	60

These statistics seem to demonstrate pretty clearly that blood pressure is directly associated with elimination of toxine and that the ratio is inverse to elimination. The idea is not new, but these tables are confirmatory of it.

Analysis would seem to point to two actions of toxines upon the vascular system, which produce increased blood pressure; first, a tonic effect upon the vessel wall, causing its contraction; second, an increase in viscosity of the blood. A third influence of toxines must certainly be upon the parenchymatous cells of the body. It is certainly so, that their protoplasm may become greatly disturbed, with the end result that the balance between metabolism and osmosis is upset and the necessity arises for acceleration of the velocity of current in the capillaries.

There is plenty of evidence to show that tension may be lowered by regulating the intake of food and increasing the elimination of toxines: in other words diminishing the intake of proteins and washing out the toxines which result from faulty metabolism.

Much more could be said about the pathology of blood pressure; but we have confined ourselves to what seems to us to be the crux of the situation in the hope of rendering clearer what at best is complicated and somewhat difficult to grasp.

Conclusions:

I. The pathology of blood pressure is primarily the pathology of the somatic cells.

II. Hypertension is a symptom, not an essential disease.

III. It is contraindicated in the majority of cases of hypertension to exhibit cardio-vascular depressors, as a routine treatment.

IV. Cardio-vascular stimulants are often indicated.

V. It is indicated to reduce hypertension by arresting toxine formation, securing its elimination, and decreasing the viscosity of the blood.

VI. The author does not wish to be construed as condemning the use of nitrites, and other drugs having similar action, in all cases; but to discourage the practice so commonly met with of attempting to reduce blood pressure simply because it is high.

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2. Abderhalden, Emil, Synthose der Zellbausteine in Pflanze unde Tier. Berlin, Julius Springer, 1912.
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4. Cadbury, William W., Arch. of Int. Med. Vol. 18, No. 3, p. 317 sqq. September 15, 1916.

THE CLINICAL VALUE OF THE NEW METHODS OF CHEMICAL ANALYSIS OF THE BLOOD.*

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THERE would be little excuse for this paper were it merely to present a few laboratory tests which, in fact, are already fairly well known. These new methods of blood analysis are something more than the fruit of years of labor by many workers. They represent a new trend, a new era, in medicine. The author believes that the therapeutics of the future is to be based upon a knowledge of the physico-chemical structure of the body and the mechanism by which physiological processes become perverted into pathological. This paper aims to explain the principles underlying certain new diagnostic methods in the hope that the physician will begin to think in terms of the new pathology.

The first steps in pathological research were anatomic ones. We demonstrated a consolidated lung, the formation of infectious granulomata, new growths, degenerative changes, in terms of gross and later of microscopic tissue reactions. Virchow was father of the theory that the cell was the unit of pathological processes and upon that foundation was reared the cellular theory of pathology. However, the progress of all analytical research is toward fundamentals. It became apparent to some minds that these tissue reactions are but the outward and visible signs of invisible reactions in the molecular activity of the cell. In other words, although the cell is the morphological unit of life, the physiological unit is the molecule. One of the first to perceive this fundamental fact was Victor C. Vaughan and the following quotations from his work on "Protein Split Products" give the essentials of this new conception. "The cell is not the unit of life; life is molecular. The cell is not only made up of protein molecules, but its form and function are determined by the chemical structure of its constituent molecules. The lines along which the spore, seed or ovum develops are determined by the chemical structure of its proteins. Growth in other directions is impossible and this accounts for stability in reproduction. However, gradual changes in the chemical structure of living proteins occur and in these lies the basis of organic evolution." "The only essential and constant difference between living and non-living matter is that within the molecules of the former there is constant metabolism, while in the latter no such process operates." Expressed in another way we are what we are and respond to stimuli in different ways because of the structure of our constituent molecules. Physiology, then, becomes the study of the structure and reactions of the molecules composing the body cells and the symptoms and lesions of disease are traceable to and the result of disturbances of these metabolic activities. Furthermore, it is obvious that no therapeutics can be anything more than empiricism which is not based on a knowledge of the mechanism of normal and abnormal metabolism. I am aware that this is a strictly materialistic view; that it ignores the so-called "vital" element of life, but as Vaughan has said "When matter becomes endowed with life it does not cease to be matter; it does not lose its inherent properties; it is not released from the laws that govern its structure, its attractions and its motions. In studying living things it should be borne in mind that they are material in composition and subject to the fundamental laws that govern matter and possessed of those properties essential to matter."

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* Read before the Society of Ex-Internes of the Methodist Episcopal Hospital, March 22, 1917.

The new methods of blood chemistry are discussed under the titles of the clinical conditions to which they are applicable.

Diabetes Mellitus.

The statement of Joslin that 1 per cent of all people in the United States have or will have diabetes at some time in their lives brings to us a realization of the prevalence of this disease. Until recently our only laboratory test for diabetes has been the detection of sugar in the urine. There is a difference of opinion as to what constitutes a pathological glycosuria. Folin states that he found sugar in nearly all of the urines of 100 supposedly normal persons. Benedict states that using his reagent which is sensitive to 0.01 per cent glucose he was unable to demonstrate sugar in normal urines. Joslin therefore concludes that "it seems quite impossible to demarcate sharply between normal and pathological urines with reference to sugar output." Moreover, glycosuria alone is not pathognomonic of diabetes. It can be induced by drugs such as phlorizin, by intracranial injuries and tumors, pregnancy, syphilis, etc. In hospital practice we often find a transient post-operative gylycosuria. With regard to alimentary glycosuria, the experiments of Taylor and Hulton seem to show that it is difficult to produce glycosuria in normal subjects by feeding carbohydrates even when the amount given is as large as the stomach can tolerate without nausea (500 gms.). However, the internist occasionally induces an ailmentary glycosuria in a nephritic when he places him on a low proteid and relatively high carbohydrate diet. Woodyatt, Sansun and Wilder give the normal tolerance for glucose as 0.85 gm. per kilo body weight hourly, given intravenously, and state that as regards absorption of glucose from a mucous or serous surface the rate is self-limited. "When a certain quantity is once present in the blood, no amount given by mouth, subcutaneously or intraperitonally can raise it higher." There is one other condition associated with glycosuria, namely the so-called "renal diabetes." Lewis and Mosenthal have reported a case characterized by (1) a glycosuria maintained at fairly constant level and not markedly effected by food, (2) normal blood sugar, (3) no other symptoms of diabetes. This would appear to be an example of hyperpermeability of the kidney with regard to glucose. It has not been proven that this is a distinct disease entity, some claiming it to be an early stage of true diabetes. However, this controversy can easily be settled by following these rare cases with blood-sugar estimations and determining whether they ultimately develop hyperglycemia. The excretion of glucose by diabetics varies considerably during the day and night and may fall to zero for several hours at a time. Therefore, the examination of a 24-hour collective specimen is the only reliable one. Thus we see that sugar may appear in the urine as a result of a variety of causes. Even a persistent glycosuria does not mean diabetes unless accompanied by corroborative evidence. Is there, then, a pathognomonic sign of diabetes? Since, in health, the body maintains the concentration of sugar in the blood at a constant level; since it has been proven that no amount of sugar given by mouth, rectum, subcutaneously or intraperitoneally can raise the sugar content of blood beyond a given point, I take it that the pathognomonic sign of diabetes mellitus is a persistent hyperglycemia. Glycosuria can be induced by a variety of agents; a slight transient hyperglycemia may be induced by feeding large amounts of glucose, but a persistent increase in blood sugar occurs only in diabetes. Therefore, a simple and easy method of estimating blood-sugar is a welcome addition to our diagnostic armamentarium.

The early methods were complicated and required large amounts of blood. However, with the application of micro-chemical methods to blood chemistry, the test has become quite simple. From 1 to 5 c.c. of blood are required and in Epstein's modification but 0.2 c.c. which may be obtained from the finger. Normal blood contains from 0.08 to 0.12 per cent of sugar. All true diabetics show a constant hyperglycemia, in mild cases ranging up to 0.3 per cent; in severe cases occasionally as high as 1.1 per cent. With many diabetics it is comparatively easy to render the urine sugar-free while the blood-sugar remains high. Therefore treatment which is controlled by urine analysis alone may not go far enough to accomplish lasting results. The appearance of sugar in the urine is a matter of renal permeability to sugar; to a crossing of the threshold, as it were. The height of the threshold varies in different individuals. Hamman and Hirschmann state that sugar does not appear in the urine until it has reached a blood concentration of 0.18 per cent. Foster finds the threshold between 0.149 and 0.164 per cent. In renal diabetes the kidney appears to excrete sugar from a normal blood concentration.

Acidosis.

The first requisite in considering this condition is a definition. Allen insists that we should restrict the use of the word acidosis to its original definition by Naunyn, which stated that its one constant characteristic was the occurrence in the blood of an abnormal amount of b-oxybutyric acid and acetone bodies. However, of late years, the term has been applied to a variety of conditions characterized by reduction of alkalinity of the blood, decreased CO_2 tension, increased H-ion concentration and reduction of "buffer salts." Since the symptom-complex known as acidosis may be induced in several different ways, each through a different mechanism, it would seem unreasonable to limit the use of the word to acetonemia. Very likely there are forms of acidosis associated with other as yet unknown and undiscovered acids. Therefore, I shall consider as an acidosis any condition in which the alkalinity of the blood is reduced.

Recent chemical research into acidosis has opened up one of the most fascinating fields in all medicine and one which I prophesy will be productive of practical therapeutic results.

The normal reaction of the blood is slight alkalinity and this reaction must be maintained within fairly narrow limits. The end products of tissue metabolism and the protein-split products arising during infections or other conditions in which proteins are digested parenterally, are acid. Their neutralization and removal from the body is accomplished by the blood and excretory organs. If acid is produced in such volume or form that the blood cannot dispose of it, the alkalinity of the blood is reduced, causing the symptom-complex *acidosis*. As a matter of fact the blood never becomes acid. Death occurs even before the neutral point is reached. In recent years numerous workers have investigated the mechanism of acidosis and made important discoveries besides presenting us with some valuable laboratory tests. They have discovered that the body has a mechanism whereby the reaction of the blood is kept within safe limits under normal conditions and is able up to a certain point to cope with the abnormal. The ingenuity of man has never devised anything like this—more sensitive than our most delicate instruments, replenishing its own waste as it proceeds, disposing of large amounts of acid without strain upon the organism. I shall explain the working of this protective function and show how interference with one part or another leads to the same clinical result acidosis.

Henderson likens the defense against acidosis to a triple system of trench lines, the bicarbonates and phosphates of the blood and the tissue proteins. The bicarbonates form the first defense line. One of the chief products of tissue metabolism is CO_2, a volatile acid. This must be removed or metabolism, which is life, will come to a standstill. This CO_2 is transported by the blood carbonates from the tissues to the lungs, where, being volatile, the CO_2 is thrown off in respiration. This is a task of considerable magnitude for Howland has estimated that a human adult in 24 hours disposes of an amount of CO_2 equal to several hundred cubic centimeters of concentrated HCl. The reaction of the blood is kept within safe limits by respiration. For example, during muscular exercise there is an increased production of CO_2. This leads to a reduced alkalinity of the blood so slight as to be undemonstrable by our most delicate tests, yet the respiratory center responds instantly with an increased respiratory rate which removes the excess CO_2 and restores the blood reaction to normal. Thus we see that hyperpnea or dyspnea is a defensive act. In fact, the more we learn about the symptoms we strive so hard to alleviate, the more we find that they are conservative, defensive, compensatory acts, efforts of Nature to overcome a menace. If instead of the volatile CO_2, some strong non-volatile acid as oxybutyric or HCl is formed in the tissues or injected intravenously, the reaction of the respiratory center is the same. Hyperpnea results. Since the non-volatile acid cannot be expired, an extra amount of CO_2 is removed and the blood reaction returns to normal. If non-volatile acid continues to pour into the blood, the carbonates neutralize as much as possible, forming sodium salts which are excreted by the kidneys. However, there is a limit to the neutralizing power of the carbonates and eventually the second line of defense is reached, the phosphates. An alkaline blood is transformed by the kidneys into an acid urine. Both acid and alkaline phosphates occur in the blood. The kidney has the ability to select and excrete the acid phosphate and hold back the alkaline phosphate to augment the alkaline reserve of the blood. This, too, is a considerable saving of body alkali for Henderson and Palmer demonstrated that the kidneys in 24 hours held back from 200-800 c.c. deci-normal alkali. When both first and second lines are overwhelmed by the production of acid or the kidney fails to do its part, the third defense system is engaged, the tissue proteins. They can absorb considerable acid without detriment to themselves and also put forth an increased amount of NH_3 which neutralizes acid. As 1 gm NH_3 neutralizes five times as much acid as does 1 gm. sod. bicarb., the importance of this third line is apparent. Thus it is seen that the organism has three methods of defense against an acid intoxication and that acidosis may result from failure of one or more of the systems and furthermore, unless we know which system is at fault we cannot intelligently treat the condition. The following examples show in how many ways the same end-result, acidosis, may be produced. The diabetic only partially oxidizes his fats and proteins with the formation of b-oxybutyric acid. The child, whose chemical equilibrium is notoriously unstable, absorbs from his intestine incompletely digested acid products and is overwhelmed with an acidosis. What is the mechanism of the acidosis which we know occurs in many acute infections? According to Vaughan, using typhoid as an example, during the incubation period the tissue cells become sensitized to typhoid protein, that is they develop a ferment capable of digesting the foreign protein. This digestion within the blood stream results about midway of the process in the formation of certain protein split products, powerful, active poisons with acid qualities. The resultant acidosis is an important factor in toxemia. When we consider that in an acute infection we are dealing with a protein sensitization, an acidosis and the effects of these upon what Crile calls the dynamic driving mechanism of the body, we appreciate that a simple infection is a complicated series of reactions and that to treat it logically we must know what is transpiring. Still another method is extensive destruction of lung tissue, whereby the effective lung area is so reduced that CO_2 cannot be excreted fast enough. The damaged kidneys of the nephritic are unable to excrete acid phosphate from the blood. It accumulates and acidosis results. Marriott, Haessler and Howland have shown that in the acidosis of nephritis there is an accumulation of acid phosphate in the blood. They state that the intestine will eliminate part of this phosphate in the feces if calcium is administered. There is much to be learned about acidosis; the products formed and their reactions with the tissues and it must be self-evident that all forms of acidosis cannot be successfully treated with bicarbonate. In fact, it may at times be harmful.

The urinary findings in acidosis are, (1) presence of acetone and diacetic acid and in grave cases b-oxybutyric acid; (2) increased output of NH_3 which is formed at the expense of urea, which is correspondingly reduced; (3) increased alkali tolerance. Whereas the administration of about 10 gm. sod. bicarb. is sufficient to render a normal urine alkaline, in acidosis from 20-40 gm. are required.

The blood findings are (1) presence of acetone bodies, (2) diminished titratable alkalinity of the serum, (3) changes in the hemoglobin dissociation curve (this test presents technical difficulties which prevent its use in clinical work), (4) decreased CO_2 tension of serum, (5) decrease in CO_2 tension of alveolar air, (6) increase in H-ion concentration of blood.

Van Slyke has devised a method for determining the CO_2 tension of the serum. Since the urinary findings do not always give a true estimation of the gravity of the acidosis, a reliable blood method is a welcome aid. The principle is as follows. In acidosis the blood is less alkaline than normal, therefore it can absorb less CO_2 from the tissues. Van Slyke saturates the patient's serum with CO_2 at alveolar tension and extracts and measures it in a special apparatus. The normal content of serum is 53-68 per cent. A reading below 50 means an acidosis.

If the blood is absorbing less CO_2 from the tissues, there will be less in the alveolar air of the lungs. To demonstrate this both Marriott and Fredericia have devised methods for alveolar air. Marriott passes the air through a solution of sodium bicarbonate containing a color indicator. The resulting color is compared with standards of known alkalinity. Fredericia employs an apparatus somewhat like the Van Slyke. Marriott has also devised a method for determining the H-ion concentration of the blood. A brief explanation of the meaning of "H-ion concentration" may be in order. Solutions tend to dissociate with formation of ions. For example, a solution of NaCl consists partly of combined Na-Cl atoms and partly of dissociated (separated) Na and CI ions. That is, separate atoms charged with positive and negative electricity. The extent of dissociation depends upon dilution and other physical factors. Pure distilled water dissociates with formation of H and OH ions. The H-ion is considered the unit of acidity and the OH-ion the unit of alkalinity. Therefore, by measuring the concentration of H-ions in a fluid we determine its acidity. Marriott dialyzes serum through celloidin thimbles into salt solution containing phenolphthalein. This is one of a group of indicators which exhibit definite depths of color in the presence of known numbers of H-ions. By comparing his dialysate with standards of known H-ion concentration, he measures the alkalinity of the serum. To avoid writing large figures he expresses the result in terms of the negative logarithm, the normal being pH7.6. Figures below this mean an increase in H-ion concentration or acidosis.

The Blood in Nephritis.

Osler once saw fit to head a chapter on albuminuria with a saying of Thomas Fuller's which would appear to be singularly appropriate for this chapter: "Reasons drawn from the urine are as brittle as the urinal." Urine analysis will be most helpful to him who recognizes its limitations but will prove a delusion and a snare to him who believes every albuminuria due to nephritis or thinks he can measure the severity of a nephritis by the amount of albumin and casts. Urine analysis tells what the kidney is putting out, but does not tell what it is holding back.

Of all the tests that have been devised to estimate the function of the kidney, the only one to survive has been the phenolsulphonephthalein test of Geraghty and Rowntree. From an experience with this test extending over several years, from comparison with the subsequent clinical course of patients and from autopsies, I believe this to be a valuable test of the eliminative capacity of the kidneys. The test is so easy to perform that all should be familiar with it.

Have patient empty the bladder; if unable to void, catheterize him. Then inject subcutaneously or intravenously exactly 1 c.c. of phenolsulphonephthalein, which may be obtained in sterile ampoules. One hour and ten minutes later (the ten minutes being allowed for absorption if given subcutaneously) have patient empty bladder completely. Place entire amount voided in container and label 1st hour. One hour later have patient again empty bladder completely, place all of the urine in another container labelled 2d hour and have both specimens examined. If patient cannot void, wait until 2 hours and ten minutes after giving dye and collect all bladder urine by catheter. Since this is a quantitative estimation it is essential that the patient receive exactly 1 c.c. of the dye and that all of the urine voided be examined, not merely a portion. Where it is possible to follow a patient it is most interesting to make repeated tests and observe an increase or decrease in elimination. Frequently an impending uremia can be foretold; or given a cardiac with broken compensation and the status of the kidneys in doubt, a renal efficiency figure which improves as compensation returns relieves our mind concerning the kidneys. This test is also valuable to the surgeon in determining operative risks.

Recently Cabot and others have called attention to the fixation of the specific gravity of urine in chronic interstitial or arteriosclerotic nephritis. The specific gravity of normal urine depends upon fluid intake and output and excretion of total solids and varies widely at different periods of the day and night. In the arteriosclerotic kidney if we measure the specific gravity every two hours we find it fixed at a low point, under 1015, and remaining there quite constantly regardless of modifying circumstances.

In the past ten years a vast amount of work has been done, chiefly in this country, on the chemistry of the blood and realizing the limitations of urine analysis, much of this work has been on nephritis. The end-products of tissue metabolism consist of a few relatively simple nitrogenous compounds which are grouped together under the heading of non-protein nitrogen of the blood. This group as a whole and its constituents comprising urea, uric acid, creatine and creatinine, it has been found are excreted by the kidneys at such a rate as to keep their concentration in the blood at quite a definite and constant level under normal conditions. Anything which impairs the functional activity of the kidneys causes an accumulation of these substances in the blood. It would be reasonable to expect that a slightly damaged kidney would experience the first and greatest difficulty in excreting complex compounds, while still able to excrete at normal rate the simpler ones. Meyers and Fine were the first to demonstrate this fact which they term the "staircase" effect. Uric acid, being the most complex, is the first to be retained in the blood in mild nephritis. As the disease progresses the kidneys have difficulty in excreting urea, which accumulates. When the kidneys reach a stage where they cannot excrete the chemically simple creatinine, Meyers and Fine give a hopeless prognosis.

It is not possible in a paper of this length to enter into a discussion of the relation of nitrogen retention and uremia. Whether the symptoms of uremia are due to the accumulation of these substances is an open question. It may be that an accumulation of substances in themselves not especially toxic may so clog the wheels of metabolism by disturbing the physico-chemical equilibrium of the body as to endanger life. Or there may be toxic substances as yet unrecognized. However, enough has been done to show that in many cases where the status of the kidneys is doubtful, by supplementing a careful urine analysis and renal efficiency test with a chemical analysis of the blood, a more complete picture is obtained and diagnosis and prognosis are aided. The idea of blood chemistry is not to supplant other laboratory aids but to supplement them.

Having found a retention of one or more of the non-protein nitrogen group, the interpretation is important. Mosenthal states that in the interpretation of an increase of non-protein nitrogen in the blood four factors are to be considered; (1) retention of nitrogen by an insufficient kidney, (2) inspissation of blood due to loss of water, (3) increase of protein catabolism, (4) the chemical combination in which non-protein nitrogen exists in the blood. The first factor is the most important. To these I wish to add a fifth: consideration of the personal equation of the pathologist. These tests are made upon small amounts of blood; no one but the pathologist appreciates the technical difficulties and sources of error and even with the most careful worker there is an irreducible minimum of error in any colorimetric method. Therefore, the kidneys should not be condemned on slight variations from normal. Take account only of considerable variations which have preferably been confirmed by repeated tests.

In conclusion, some practical suggestions concerning collection of blood may be appropriate. The blood should be drawn from a vein before breakfast or several hours after a light meal into a sterile bottle or flask containing a few grains of sodium citrate or potassium oxalate. 25 c.c. of blood suffices for a complete analysis. Shake to mix citrate or oxalate with blood which prevents clotting. The blood should be examined immediately, especially when CO_2, blood sugar or creatinine is to be determined as these substances quickly change.

The author has said nothing about many tests of doubtful value, preferring to emphasize those which throw light on various metabolic disturbances. The thought which he has sought to convey is as follows. The symptoms and lesions of disease are the result of disturbances of molecular metabolism. Diagnosis may be aided by tests designed to expose these disturbances. Therapeutics which is not based upon a knowledge of molecular pathology certainly is not rational and can only be successful by chance. The few facts presented are but a drop removed from the ocean of ignorance and impounded in the reservoir of knowledge. Medicine and pathology are only in their infancy. We have still to learn the structure of the protein molecule, wherein one protein differs from another, the countless reactions between them and the physico-chemical conditions under which they operate.

PREVENTION OF DEFORMITY FOLLOWING POLIOMYELITIS.

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THERE is much uncertainty today concerning the after-cure of infantile paralysis. Parents of patients are "tossed about by every wind of doctrine." Not clearly understanding the treatment themselves, the profession is allowing parents to be thus tossed, and seeing poor results is giving entirely too pessimistic a prognosis. Having abundant opportunity to see all this, the writer presents this paper in the hope that he may help to clear up the uncertainty, that he may present some simple methods of preventing deformity and lead his colleagues to share something of his optimism. We must admit that we have a great deal to learn concerning the cause, the transmission and the treatment of the acute stage. But today we should have no uncertainty about the care of the convalescent stage—the two years following recovery from the acute symptoms. Too many physicians of standing have had such experience as fairly leads to the statement that pursuance of the principles herein outlined results in a high percentage of muscle efficiency. The writer believes that there should be no "chronic" stage—certainly infantile paralysis should leave in its wake *no disabling deformities.*

The treatment of convalescence from infantile paralysis is based on the following well-known principles:

1. So-called "paralyzed" muscles (even residual paralysis) tend to recover; recovery may be hastened or retarded according to treatment.

2. For any given joint-control, muscle recovery tends to be unbalanced; stronger muscles pull a part (as foot, leg, trunk or arm) toward the side of the stronger muscles.

3. Uncombated, this muscle pull becomes a fixed contraction of the stronger muscles, and deformity ensues.

4. The retention of a moved part away from the neutral position causes the weaker muscles to be kept stretched. Such stretched and strained condition of the weaker muscles greatly *retards* their *recovery.*

5. The prevention of deformity is thus the first and constant duty of the medical attendant.

6. Deformity prevention being assured, gradually-applied massage and muscle training materially aid muscle recovery. Muscle development, whether by massage, passive movements, electricity, osteopathy, or any means that does *not* take into account the necessity of preventing unequal muscle control of joints and deformity, inevitably develops the already stronger muscles faster than the weaker ones. Attempts at overcoming contraction deformity by repeated manipulations only increase the resistance and, therefore, the strength of such muscles.

7. Thus the medical attendant should also supervise the muscle training and should especially guard against over-training. Muscle fatigue retards muscle recovery. The weak muscles should be "tenderly nursed back" to efficiency.

The writer has had the opportunity to supervise the after-care of many scores of the victims of 1916, including the severest types. He can state that deformity has been prevented in those which he has controlled, and that advance toward ultimate usefulness has been progressive and without setback. That he now sees an ever-increasing number of deformities, in children not *protected,* warrants the word of warning at this time.

The greatly-weakened patient should be kept in bed for many weeks—sometimes months—with such simple apparatus as will insure absolute neutrality of position of all parts of the body. While lying in bed, the child may have unequal pull of the trunk muscles, tending toward *spinal curvature.* The Bradford frame of gaspiping and canvas or the simple padded backboard, with abdominal binder, is usually sufficient to control this. A *deltoid* paralysis, with returning power in the pectoral muscles, will cause a bad forward pull of the shoulder, which may be easily overlooked in bed. It can be controlled by fixing a slab of wood at right angles to the backboard and bandaging the arm to it. A common deformity in bed is that produced by contraction of the hip-flexors. To prevent, or to overcome this often requires the addition of two lateral uprights nailed to the backboard at either side of the pelvis, for exact fixation of the child, and bandaging of the thighs and knees to the backboard. On the other hand, weakness back of the knees, from the ordinary sagging in the bed, leads to strain of the hamstring muscles and knee-back deformity. It is overcome by placing a small pillow beneath. The various deformities of the foot require special attention. The most common contraction is that of the tendon Achillis, causing foot drop deformity and strain to the foot-raising muscles (dorsi-flexors). Here the posterior splint of plaster of Paris is effective. Plaster of Paris as an enclosing dressing should be of temporary use. It is limited to three weeks at most, or until an actual muscle contraction is overcome. A common disability of the severely-involved and the still bedridden patient is the combination of foot drop with outward rotation of the thigh (weakness of internal rotators). To meet this, one adds to the posterior plaster leg splint a small wooden spur, placed at the back of the heel of the splint and directed outward. It completely controls both disabilities and without employing the trying hip spica. Some cases are so completely disabled as to require a backboard with both arms bound to laterally-projecting slabs, with pelvic fixation and with both feet held in posterior plaster splints with lateral spurs.

When a weak-backed patient gets stronger, he is allowed upon the inclined backboard, with front projecting pieces of wood, so placed and padded as to act as crutches under the arm-pits. If there is also deltoid weakness, a laterally-projecting shelf may be so fixed to the backboard as to insure horizontal support to the arm. As all sitting positions, including the semi-reclining one just mentioned, favor the contraction of the hip-flexor muscles, this must be watched for. This danger leads the writer to favor the continuance of bed treatment, with progressive muscle training, until standing positions may be safely assumed.

Shall we keep children off their feet until all or most of the muscle power has returned? In the Seaside Hospital, where we control more than a hundred children of the 1916 epidemic, this, with skilled muscle training, has been our rule. The results warrant our conservatism. Many children whose voluntary muscle control on entry had been scarcely more than that necessary for breathing and eating, are now walking about with very little bracing and with *no deformity*. In private practice, where the urgency of parents has been great, the writer allows some to get about with rather more bracing than would otherwise be necessary if they waited longer in bed. But all such braces are so arranged with stop-joints and exact fitting that unbalance of voluntary control is not permitted to act in deformity production, and weak muscles may gentle resume their function. Such bracing and such close approximation to normal leg and foot function hastens the return of power and is safe—will prevent deformity. Speaking of bracing, the writer states that in elaborate heavy bracing and for long time use, he has no faith; on the temporary splinting of this and that part, to meet a special protection need and to *prevent deformity,* he insists. In the proper care of these braced-children, it is a common experience to cut down a long to a short leg brace as joint-control after joint-control may be safely assumed by the patient. The rule is as little as is required, but as much as is necessary for protection and for deformity prevention.

The scope of this paper prevents the discussion of the correction of deformity if it has occurred. If within the first year after onset, mechanical means will usually suffice; if later, operative procedures have changed helpless cripples into useful citizens. All such procedures are enhanced by muscle training. Deformity and its delaying effect upon muscle efficiency should have been prevented. But even after long deformity, its correction and proper training will eventuate in much return of power to muscles that may have been thought hopelessly paralyzed.

This paper lays emphasis on the necessity of preventing deformity following infantile paralysis; it details some simple means to accomplish that end; it endorses gradual and progressive muscle training, but warns against muscle fatigue, either from weight-bearing or from over-training; and the writer wishes particularly to combat, through the profession, the tendency on the part of parents either to get discouraged and neglect their children at an important period, or to place them, uncontrolled, in the hands of those who know nothing of the mechanics of deformity production, but who blindly continue with massage, passive motion or electricity, to develop the strong and shortening muscles to the great disadvantage of the weaker ones.

Deformity after poliomyelitis is disability and delays recovery and can be prevented.

TUBERCULOUS MENINGITIS.

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Tuberculous meningitis, which in 81 per cent of cases is secondary to a discoverable tubercular lesion elsewhere, is due to the presence in the pia of the tubercle bacillus, often in conjunction with some other pathogenic organism. Frequently the base alone is involved, hence the term "basilar meningitis," the type so commonly seen in infants. Trauma may be a factor in many cases though to the writer this is a questionable etiology, for in what history can one not obtain a story of the child having fallen upon the head or been struck by some object?

The typical miliary tubercle is found either in small foci or in large areas invading the membranes and deposited along the course of the cerebral blood vessels. It is in the latter situation that they make their inital appearance lining the vascular walls, later becoming imbedded in the mass of inflammatory material composed of lymph and fibrin occluding the spaces in and about the Circle of Willis, between the optic chiasm and the cerebral peduncles, and around the pons and medulla, or filling the sulci and fissures on the convexity.

This exudation, embracing as it usually does, the cranial nerves, produces a neuritis, certain motor irritative phenomena, or varying paralyses; or a diffuse encephalitis or a hemorrhagic encephalitis may be a complicating feature. Frequently in addition to the thick mucilaginous exudate a great amount of serum collects beneath the pia; rarely if ever is there found a purely purulent process. The ventricular cavities are always distended and in those cases in which closure of the fontanelles has not taken place they are bulging, and a condition of hydrocephalus usually develops during the second week of the disease.

We will now enter into a discussion of the symptomatology as separate items, and later picture a typical case history.

T. P. R. The temperature is uniformly low, ranging from 100° to 102°, and the pulse and respiration are irregular depending to a great degree upon the extent of the basilar process. The breathing is at first rapid and sighing, in the final stages becoming Cheyne-Stokes.

Constipation is always an obstinate feature of this disease.

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*Read before the Brooklyn Society of Internal Medicine.

Headache is a constant early symptom. It increases in intensity until at last it gives way to delirium and later coma. It may be localized but is usually diffuse.

Nausea and vomiting are frequently present the latter of the "cerebral" or "explosive" or "projectile" type.

Rigidity of the neck, so uniformly observed in the other varieties of meningitides is often absent in the tuberculous. Kernig's sign and other pathological phenomena such as the knee-thigh sign of Brudzinski, and the contralateral reflex of Brudzinski are not so certain of elicitation in this form of meningeal inflammation.

Hyperaesthesias may or may not be present. As a usual rule the child is extremely sensitive to touch, cries aloud when its position is altered, and shows an abhorrence for the slightest light or noise.

Motor irritative phenomena are universally in evidence. Here again, however, they are not manifest to the same degree. The second stage of the disease which we shall mention later, is almost always ushered in by a general convulsion which possibly may have been preceded by exaggerated reflexes, fibrillary twitchings, or myotatic irritability. At intervals the general convulsions are repeated again and again. In conjunction with this there may be seen a muscular relaxation of the whole body, in contrast to the extreme rigidity of opisthotonos of cerebrospinal meningitis.

Paralytic phenomena follow. Pressure paralyses irregularly situated cause monoplegias or incomplete hemiplegias.

Eye symptoms. The ocular palsies are especially common, varying in latitude and degree almost while one is conducting the examination. The sixth nerve, as always, is particularly susceptible to attack, and diplopia is produced by failure of one or both abducens. Nystagmus is a prominent symptom. It is vertical, lateral, and oscillatory. There is an oblate pupil which reacts sluggishly and in fact often dilates when light is thrown upon the retina. It is very common to find an undulatory movement of the pupils. Early in the course of the disease they are miotic, but later hand in hand with increasing irregularity dilatation takes place.

Of the other cranial nerves, the facial is the most frequently involved because of its exposed position.

The reflexes show all manner of changes and combinations, from a clinical standpoint apparently without significance. The Babinski in children is, of course, of no diagnostic value.

Mental symptoms are of primary importance, for often it is merely a slight change of temperament which is looked back upon as the beginning of the disease after the latter has become sufficiently advanced to permit of no doubt as to its presence. This may be a dreamy, inattentive attitude in which the child cares little for its toys and seems at times restless, fussy, or irritable. The little patient may be recovering from measles or whooping cough and the change of disposition is laid to the convalescence. As the trouble grows more evident the irritability increases, there is a certain amount of clouding of consciousness and the child becomes stupid. At night it is easily aroused, cries without cause, and can be put to sleep again only with the greatest difficulty. Still later unconsciousness supervenes, and finally coma.

Let us now consider the course of a typical case which customarily presents itself in three stages.

A child of from two to ten years of age is convalescing from some incidental disease, or possibly has a definite pulmonary lesion, a tuberculous peritonitis, or a tubercular focus in some bone or joint from which it is not recovering with proper celerity. It does not gain in weight, remains anemic, is fretful and peevish, whines at its mother, and is dissatisfied with everything presented for its amusement. It sleeps less than usual, and when it does finally drop off is uneasy and restless, grinding the teeth, muttering aloud, and waking at the slightest provocation. While conscious there is complaint of headache, loss of appetite, and drowsiness. Nausea and vomiting occur and an obstinate constipation appears. As was previously mentioned, the temperature shows a low febrile curve, the pulse is but slightly accelerated, and the respiration may be normal but sighing and considerable yawning accompanies it.

At this point a tuberculous meningitis may be suspected and confirmatory evidence searched for,—either clinical findings which will corroborate the diagnosis, or laboratory tests which will assist the clinician.

This preliminary stage lasts for from one to two weeks and usually the picture presented by the foregoing prodromata is suddenly changed by a convulsive seizure which leaves the child in a stuporous condition from which it cannot be aroused. The convulsions are general and oft repeated. In the intervals the patient is very evidently much worse than in the preceding stage, crying aloud, rolling its eyes and head and body from side to side unceasingly. It shows displeasure at being touched or disturbed in any way, and light and noise are annoying. Delirium soon appears.

Physical examination reveals small irregular pupils which may or may not respond to light, and which dilate and contract without stimulus. There is a variety of nystagmoid movements and ocular paralyses are usually present. Retinal examination shows a double choked disc. Tubercles may be deposited in the choroid.

The fontanelles are bulging and hydrocephalus may develop. The neck and body are sometimes rigid, the reflexes are exaggerated, dermographia is present on a dry skin which may show eruptive or ulcerative changes, fibrillary twitchings are numerous, myotatic irritability and myoidema are common, and incomplete variable paralyses show themselves. *One of the conspicuous features of this second stage is the variability of the symptoms.* Remissions take place in which there seems to have been great improvement in the general condition, but the patient soon lapses again into a stupor as deep or deeper than that which preceeded. This stage lasts for from a few days to over a week and merges gradually into the third or "comatose" stage. It is here that the paralyses are more apparent. One or more of the cranial nerves are involved and bulbar palsy may appear. Monoplegias and hemiplegias occur. The stupor continues to increase until finally a deep coma ensues and the emaciation is extreme. Death takes place in from two to seven days as a result of the exhaustion due to the latter or during a convulsion.

Unfortunately the prognosis is uniformly bad. A few, however, get well. According to Starr, one-quarter of the cases die during the first week of the second stage, one-quarter in the second week, one-quarter in the third week, and the other quarter within eight weeks.

The differential diagnosis from the other forms of meningitis comprises such factors as heredity, age two to ten years, a preliminary prodromal stage, acute and irregular course, the presence of tuberculosis elsewhere, moderate temperature, early cranial nerve involvement, greater apathy with less restlessness, petechia and herpes not so frequent, Kernig sign and rigidities if present at all occur late, tubercles may be found on the choroid, and the lumbar puncture findings.

The typical spinal fluid of the tuberculous meningitis is clear and abundant with flecks floating about, fibrin formation, and marked lymphocytosis. Tubercle bacilli are found (possibly during the first stage, if not in the second), guinea pig tests demonstrate the tubercular nature of the fluid, and cultures fail to show the presence of pyogenic organisms.

The other forms have a less abundant pressure, fibrin is not so liable to form or if it does is not so dense, pyogenic bacteria may develop, and there is an increased cell count in addition to the lymphocytosis.

It may not be inapropos, in view of the happenings of the past summer to discuss the differentia of the meningeal type of acute anterior poliomyelitis which made up a great part of the number of cases of infantile paralysis last year.

1. The paralyses in poliomyelitis appear earlier, are more extensive, and of the "group" type.
2. They are attended by no exacerbation of constitutional or cerebral symptoms, as is the case in tuberculous meningitis.
3. There is less restlessness.
4. In both types the child is apathetic, but in poliomyelitis it is capable of being aroused, in which case it is intelligent and the mind is more or less clear.

Prophylaxis, general hygienic measures, mild sedatives and hypnotics, and a caution against overzealousness on the part of the nurse or parents constitutes the little treatment which we have at hand. Operation has been advised but is of doubtful value.

TUBERCULOUS PERITONITIS.

Robert F. Barber, M.D.,

Brooklyn-New York.

The etiology of this disease is not obscure. The infection is primary only in exceptional cases. It is most frequently secondary to pulmonary tuberculosis, tuberculosis of intestine (especially in children) of the tonsils, Fallopian tubes, genito urinary tract in male, appendix, miliary tuberculosis, and rupture of a tuberculous mesenteric node. Jacobson says that 3.5% of all autopsies show tuberculous peritinitis: That 100% of these show general tuberculosis, that 84-92% show pulmonary tuberculosis, that 65-74% show intestinal tuberculosis. The disease, according to Osler, occurs in females twice as often as in males. The reason for this very common impression is that this disease is discovered so often by accident in gynecological operations, and reported. Hence more cases in the literature occur in females than in males. Autopsy reports and reports from other medical sources would tend to show that the occurrence in the sexes is nearly equal. The disease is common at any age up to forty years, 80% occurring before the age of thirty.

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*Read at a meeting of the Brooklyn Society of Internal Medicine, Feby. 23, 1917.

The disease occurs in three forms: (1) Miliary or exudative, (2) fibro-adhesive (3) suppurative, with caseation. The miliary form may or may not have adhesions, and the fluid is sero-fibrinous or bloody. In the second type there is no exudate and general adhesions are present. In the third type matted areas of ulcerations and caseation are found.

The prognosis in the disease is not especially good. Rolleston states that the young do better than adults. In cases due to a removable focus such as the tubes or appendix, the prognosis is better. In cases showing pulmonary, bone or lymph involvement, the prognosis is bad. The cases, as a whole, followed for two years after the onset of the disease, whether operated upon or not, will show 50% mortality.

The symptoms of tuberculous peritonitis are not sharp and distinct. The onset is acute in only about one-third of the cases. The majority are chronic from the start. The temperature is usually normal, but may show 99° to 104°. The patient may show progressive wasting or remain robust. The tuberculous look is usually a late symptom. The bowels may be normal, but more often show constipation or diarrhoea, the latter especially in children. Pain is present in a good percentage and may be referred in some instances to the tube, appendix, or gall bladder.

The exudative types show a fluid wave, the diagnosis being confirmed by aspiration and animal inoculation. The other types may show a boggy mass due to the matting of the caseous areas or retraction and thickening of the omentum. Skin tuberculous tests are of no value, except in very young children.

The diagnosis of the tuberculous peritonitis is not always easy, even in the exudative form. Diagnosis is especially difficult in the localized forms. The points to be kept in mind as giving similar pictures are atrophic portal cirrhosis, ovarian or other cysts, and malignant disease. In ninety-six cases quoted by Hyde, thirty were incorrectly diagnozed as cysts. In portal cirrhosis the abdominal veins are distended, the liver small, and there may be a slight jaundice. A complete physical examination and the finding of a tuberculous focus in the lungs, or elsewhere, should arouse suspicion. The age and the history of the case may be of some help in differentiating malignant disease.

The medical handling of these cases resolves itself into a general antituberculous hygenic treatment. Rest in bed is essential. Sum is an important factor. There are no medical specific. Tonics are used generally, while some employ mercury or iodine locally. Tuberculin has its adherents. This medical care is very important, because even if the case comes to operation, this treatment must be employed both before and after the surgeon enters upon the case. Owing to this latter fact the medical conservatives hold that the good results of surgical treatment are apparent, not real. The real benefit is due to the subsequent medical care.

The first surgical report of a laporotomy done on this condition was by Spencer Wells in 1862. Koenig followed in 1884 with four cases and in 1890 with one hundred and twenty cases. Many cases are reported in the literature. There is considerable difference of opinion as to when to operate on these cases. Rolleston lays down the following:

1. Surgery is contrindicated (*a*) in cases under one year of age (*b*) in cases with general or widespread tuberculosis (*c*) in cases with the fibrous forms.

2. Surgery is necessary in obstructive or ascitic forms. Patients do better that are not operated upon at once. It seems better to wait for four to eight weeks after the onset of symptoms. Many materials have been used at the operation to act upon the infection and wash out the abdomen. In this class might be mentioned normal salt solution, peroxide, boracic acid, iodoform, permanganate, bichloride of mercury, and oxygen gas. Although most of these agents do little if any harm, results equally good are obtained by simple incision, removal of the fluid, exposure of the diseased area to the air, and removal of any focus of infection such as a tube or appendix, which might present itself. After one or two operative exposures of the infected peritoneum the tubercles clear up and the exulate ceases to form. The reason that surgical interference acts in this manner is not known.

Summary:

1. Tuberculous peritonitis is usually a metastatic infection.
2. It occurs in the exudative, the fibro adhesive and the suppurative caseous forms.
3. The prognosis is not any too good. Probably 50% die either because of the disease itself or the primary disease.
4. The symptoms are not sharply defined and mistakes in diagnosis are common.
5. The medical treatment is highly important either with or without the surgical. The surgical treatment acts beneficially in a manner which is not understood. It has the backing of surgeons of large experience.

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EDITORIAL

RUMOR

SOME little time ago the daily press published a complaint made by some enlisted men that conditions on the Hospital Ship Solace were unspeakable. The accusation, which was made in the form of a round robin, alleged overcrowding, lack of drinking water, inattention, lack of beds, and such filthy practices as the piling together of bedding from cases of scarlet fever, measles and other communicable diseases, and the washing of infected dishes in lavatory basins intended for the use of patients. The impression made by a communication of this kind is always a painful one because of the common feeling that where there is smoke there must be fire and the further impression that conditions must be exceptionally bad to have driven enlisted men to the length of airing their complaints in round robin form. It is with more than usual satisfaction, therefore, that one reads the report of the Committee of investigations, composed of Dr. William H. Welch, Dr. Abraham Flexner and Mr. Nathan Straus, whose respective standing in the community is an absolute guarantee of the fairness of the investigation. These gentlemen find that when the charges were written the Commander of the Solace had to meet an unusual crisis and care for an extraordinary number of patients; that in consequence, litters were used to supply the lack of berths and cots, but that, nevertheless, isolation of the various types of diesase was efficiently observed and that at no time was the bedding of scarlet fever patients placed where it could be used by patients with the measles. The Committee sifted the charges with great thoroughness and seems to have finally limited them to the outpourings of one malcontent who combined with a few minor facts of his own experience a deal of hearsay and wove it into a composition of formidable appearance. If one is to judge of the credulity of the American people by the number of circumstantial accounts of serious happenings that are being suppressed by the Government, of disguised German spies, of troops slipping out on transports in the still hours of the night, and so on, it may be readily judged to what proportions this unfounded publication of an irresponsible sailor will swell as it passes over the country and no amount of official investigation and official denial will ever quite wipe out the track of the lie until it dies a natural death. Its publication has done great harm that is by no means offset by the gratifying truths brought out by the investigators in their report. H. G. W.

DOCTORS AND THE DRAFT.

THERE was a great mass meeting at the Hippodrome for the A. M. A. Col. Roosevelt was there and spoke his mind as usual. He has a way of instilling enthusiasm into the people that is a mighty asset of the country at this time. Among the other speakers was Dr. Martin, clad in the uniform of the service. He too, was full of enthusiasm and is reported to have denounced in words of fire any physician under 55 who had not enrolled in the Medical Reserve. These are times when enthusiasm counts, when the clash of the cymbals and the blare of trumpets and the thunder of oratory are necessary to wake up the country and stimulate the irresolute. In the old days of perfervid patriotism, before the firecracker drove him from the platform, the Fourth of July orator held the centre of the stage and they always chose him for his voice and his power to picture the glories of his native land and its proud triumphs without having to blush at his own rodomontade. It may be that Dr. Martin thought the doctors of the country needed a tongue lashing, or he may only have thought to turn an epigram to set them thinking, but if so, he had done better had he qualified his statement so as to present the needs of the Medical Service logically and reasonably. Patriotism is a quality that includes self-sacrifice as its most essential component virtue; the next in order—duty to one's self and duty to others. In a problem such as the country now faces it devolves upon the medical profession to consider two equally important essentials, the needs of the Army and the needs of the Civil Community, for each is absolutely dependent upon the integrity of the other. For the Army Medical Service there are required certain medical acquirements unknown to the average practitioner, such as camp sanitation, the control and disposition of medical units, the transport of wounded and the routine book-keeping so essential to the orderly performance of army duties. These things require training in advance and training in advance postulates the early addition to the Army Medical Corps of the necessary number of adaptable men. The care of the civil population means that there must be left behind a sufficient number of the more capable men trained in hospital as well as private practice to assure the orderly and efficient continuance of the duties dependent not only on physicians in private practice but upon the hospitals and various Departments of Health. Now, if every man below the age of 55 rushed immediately into the army, it is manifest that there would be an immediate disruption of civil practice to the great detriment of the entire community, a fact so evident that it does not need elaboration. But there is another and more practical side to the proposition that one may emphasize without fear of being charged with venality. How many physicians between the ages of 30 and 45 are there who can afford to lay aside their practice and accept the pay of a 1st Lieutenant or even a Captain? Let us suppose that a physician has obligated himself by the purchase of a home with an all consuming mortgage, that he has assumed the responsibilities of a considerable life insurance and that there are dependent upon him a wife and children for whom he is bound to provide a home, sustenance and education, is it fair to assume that such a man's patriotism calls for the sacrifice of his home, the education of his children and the reduction of his income to an amount barely enough to provide food and clothing for his family? If such a man hesitates before volunteering is he to be stigmatised as a slacker and branded as unpatriotic as Dr. Martin so broadly puts it? There are hundreds, yes thousands, of such physicians in this country; men who if they reduced their income to the level of a subaltern's pay would be sacrificing not themselves, but their wife and children on the altar of their country. On the other hand there are very many men without a single family tie, without even a fixed income, who owe precisely the same duty to their country. It is these men who should make up the first installment of volunteers for the medical service. If the American people are entering upon this war with the determination to do everything that can be done in the most thorough and efficient manner, if they have decided that fitness shall determine responsibility, then it is essential that the Medical Corps of the Army shall be recruited by the same means, under the same plan that is applied to the entire military forces.

It must not be understood that in thus presenting the question there is any lack of appreciation of the need for enthusiasm or any desire to minimize the value of the service that can be rendered by older men; the point that demands emphasis is this, that where sacrifice is demanded of the medical profession as citizens, it should be so apportioned as to fall lightest upon those of whom most has been demanded. Everyone as time goes by will have to bear an increasing burden of personal service, of taxation, and will have to assume more and more the responsibility of safeguarding the interest of those who are doing the active military work, but wholesale condemnation such as Dr. Martin displayed should have no place at such a time.

THE SHORTCOMINGS OF THE HEALTH DEPARTMENT.

THE Department of Health is constituted to conserve the health of the community. This is axiomatic. The larger the community, the more diverse the duties of the Health Department become. This is also an axiom. In this great city of New York with a population of some 5,000,000 of people, we have a Health Department of which we are justly proud. It has established hospitals not only for the isolation of contagious diseases, but for the scientific observation and care of those who may be so unfortunate as to require isolation. It has undertaken the establishment of sanitaria for tuberculosis and has accomplished great good therein. It has established a Department of Child Hygiene equipped with nurses and physicians and is offering free dental treatment and free surgical treatment to the City's children in the public schools, for which in one way or another the doctors of the City pay. It has established a Diagnostic Laboratory which gives more or less prompt reports. It publishes a bulletin of its activities. It deals with such problems as poliomyelitis; and it possesses, through its code of ordinances more theoretical power than any other department of the city's Government; but when it comes to the simple comforts of the tax payer, it falls down sadly.

Let us elaborate, and in dealing with an unpleasant subject, let us strive to handle it with all becoming decency. It is needless to inquire why there was a broken window in the cellar, or why a moribund cat should choose a coal bin in which to breathe its last; one need only say that the editorial attention was called to the matter by what Kipling calls the faint adumbration of a smell stealing upon the senses rather as a pale blue sensation than a distinct odor. It grew, however. It was half-past ten on Friday night when our search was crowned with success and the source of this pollution was hurriedly cast forth and the Police Department notified. The Police Department immediately notified the Department of Health, which claims the privilege of affording the proper obsequies to such derelicts and rather discourages the private enterprise of the charitably disposed who might be inclined to plant the remains for the encouragement of horticulture; at any rate the putrid corpse in question remained from Friday night until Monday afternoon, an eyesore, an offense to the nostrils and the delight of many flies, before the Health Department removed it. To those of us who drive about the City streets it comes as no shock to find that this is not an isolated experience; the streets of Brooklyn can daily furnish enough dead dogs and cats to keep one offal wagon busy. It is unfair to judge of the efficiency of a whole department by the failure of one of its co-ordinated branches to look after its duties promptly, but it strikes one as grimly humorous to see the street sweeper three and four times in the day carefully sweep around those hallowed remains because, forsooth, they belong to the Department of Health.

Incidentally there are preventable street noises that the Department of Health overlooks. No matter what taxes one pays, or how select the neighborhood in which he lives, he is powerless to prevent the playing of hand organs before 9 o'clock at night, with some trifling restrictions, and if he protests he is told by the alien who mangles the music "I gotta da permit to play 'till 9 o'clock."

When it comes to theoretical socialism the New York Health Board is fine, but in the minor practical details such as cats—!

H. G. W.

Society Transactions

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS

Regular Meeting March 20, 1917

Paper: "Bronchial Asthma in Children: Its Treatment."

By Fritz B. Talbot, M.D., of Boston, Mass.

Dr. Alexander C. Howe, in discussion, said:

"It was my pleasure to watch Dr. Talbot in his work some three years ago, and it was his work and that of Dr. Goodale's that interested me, not only in asthma, and the anaphylactic treatment of asthma, but also in hay fever and other forms of anaphylaxis.

"In referring to asthma we have to get rid of the old idea which we have inherited from former generations of practioners. Asthma is not a spasmodic bronchitis. Asthma is a wheal in the lung. It is due to the absorption of an undigested or native protein in the circulation. The wheal may show itself in the lung; it may show itself in the skin; it may show itself in the nose in the form of hay fever; it may show itself in the form of a swelling in the subcutaneous tissue as in angioneurotic edema; it may show itself in various ways. Now, in studying asthma in children in this way we are only studying one of the forms of anaphylaxis or sensitization of proteins.

"The work of Frauenthal, of New York, and Horn in California, two or three years ago demonstrated that asthma is not a spasmodic condition of the bronchial tube because they bronchoscoped quite a number of patients during the active attack of asthma and found that the bronchi were closed by an edematous swelling of the mucous membrane of the bronchi, and free secretion of fluid. It was analogous to the condition of the mucous membrane in the nose during hay fever. The nose in hay fever is not red, as in an inflammation, but it is white, it is swollen and, as I say, it is analogous to that in the bronchial tube. You have to study asthma, not from the idea of a spasmodic condition, but from the idea of an oedema.

"Now, why is it that in children you are more apt to get asthmatic conditions than you are symptoms of a skin lesion? In a child I understand that the possibility of absorption of a foregn protein in the circulation is greatest in infancy; that is, in the first few months of life the intestinal mucous membrane, the proteins from the intestinal tract pass very readily through the mucous membrane into the circulation, so it is very easy to sensitize a child in the first few months of its life. As they grow older the chances for the proteins to pass through grow less and less until, finally, at 10 or 12 years the initiation of a bronchial attack in children through sensitization decreases rapidly.

"The reason you get asthma in children, as was stated tonight, is because of the fact that what one absorbs from the intestinal tract shows itself as protein poisoning. If ingested through the nose, then you get hay fever and other symptoms in the skin or in the lungs in the form of asthma. As they grow older and the protein is ingested through the nose, then you get hay fever and other symptoms at the point of ingestion. If the individual is greatly sensitized, then with ingestion of a protein through the nose, as in pollen for instance, you will get the asthmatic symptoms the same as if a protein is ingested through the alimentary tract, or if there be sufficient protein in a mild case of sensitization, you will also get your asthma under the same conditions.

"There is an interesting question in connection with this and that is: How is that sensitization occurs? Two or three cases which I have in mind demonstrate that the conditions must be right, or, rather, that there has to be some lesion of the mucous membrane at the time the individual becomes sensitized.

"Not so long ago a child about 3 years of age was sent to me with asthma.

For some one and a half years the child had not slept a night without an attack of asthma. It was so severe that the child frequently sat up practically all night long. The attacks began a year and a half ago. Ten days before the first attack the child was brought in from the street on a broiling hot day by the nurse and taken to the ice box and given a glass of ice cold milk, or milk off the ice. That iced food set up a very severe attack of gastroenteritis and then a week afterwards the child began to have asthma. It was the lesion due to the attack of gastroenteritis that permitted the proteins to enter the circulation and that started this child having its asthmatic attacks. It has had them every day from that time until I saw it. The child was suffering from milk asthma. I was sure of that because the skin reactions to milk were positive. It reacted to milk and to no other food; but when I told the mother what it was suffering from, she said, 'Why, the child has had no milk in some three or four months; that the child had been taken to one doctor after another; that, first, one physician took away one thing, then another took away another thing, and then another physician took away something else, until for three months preceding the time I saw the child it had had nothing to eat but bread and butter, causing a poor nutritive condition. The solution of the problem in that case was that I took away the butter and fed it on every thing else except milk.

"One of the most severe cases of asthmatic pollinosis (that is, hay fever combined with asthma) that I ever saw had existed for some sixteen or eighteen years. The beginning of that attack was traced to the time when the man was a boy 12 years of age. It seems that one of his playmates had died (it was in a country town) and he and a number of other boys were kept in a hot room in the latter part of August with the windows shut and the shades down in order to lend to the solemnity of the occasion. They were kept there until they were almost suffocated from the heat. They then followed the hearse to the cemetery some distance away over a dusty road with a chill wind blowing in from the ocean, and as a result he developed a severe rhinitis. At that time the ragweed pollen was flying about very freely and the lesion in his nose enabled him to ingest enough of the ragweed pollen so that his hay fever began from that time on and continued until two years ago when he was relieved by injections. The lesion in that case was in the nose.

"The third case which I have to relate is the one in which our President promised you a parrot story, which I thought it best to defer until this point in the discussion. A young man was referred to me with a story of having had asthma for two years and having had a wife for four years which naturally excluded the wife. I also learned that he had a parrot which had been given to them at the time of their wedding as a wedding present. Hence the parrot should also have been excluded but I became convinced that the cause of the asthma in his case was the parrot. I accordingly asked him to send me some feathers from the bird and I made an extract from those feathers. The skin test showed a very positive reaction. To tell the story in complete form, I suggested that he leave the parrot and his wife and, incidentally, his mother-in-law as well and live some place else. This he did with the result that he had absolutely no attacks of asthma. I then suggested that he go back and spend a part of an evening with his wife and the parrot, which he did. He spent two hours in their company one evening. However, after leaving them and returning to the place where he slept he had an attack of asthma which lasted all night and was of such a severe character that he was unable to work the next day. I then suggested that they get rid of the parrot. The parrot was finally put out of the house, the rugs were removed and the woodwork throughout the house was wiped off with a damp cloth so as to get rid of any dandruff that might have come from the parrot. He then returned home and was able to sleep there undisturbed by his asthma. I am firmly of the belief that in this particular case the avenue of entrance was by way of a cautery operation which the patient had had on his nose about two weeks before the first attack. As further proof that it was due to the bird, after they had kept the bird at a bird store for two weeks, they took the thing from there and spent an evening with it at a neighbor's house and the patient had an attack of asthma that very night. That was some three months ago and he has been entirely free from asthma from that time to this.

"There is one phase of this subject that is very often overlooked, and that is that these subjects that are sensitized have an inherited taint. You will never find a case of hay fever or asthma in a child but what you will find that its ancestors had hay fever, or asthma, or acute gastric attacks from eating certain articles of food, or hives, or some form of anaphylaxis. That is positive in almost every case. You can often predetermine, knowing the family history, when the child will probably develop some form of anaphylaxis. That is to say, if there is a decided history of sensitization in both parents, the child will frequently, or in a large percentage of cases, develop some form of anaphylaxis by the fifth year. If there is a strong taint only on one side of the family, they will rarely develop it before the tenth or fifteenth year; and when the taint is only a slight one on one side and there is none on the other, it may run to the twentieth or twenty-fifth year. By taking those facts into consideration you can very frequently determine by the history when it is possible for the subject to become sensitized—and to protect them accordingly."

Dr. George F. Little, in discussion, said:

"Asthma has been divided by the speaker into three groups, inspiratory, ingestive and bacterial. I am quite interested in the subject and hoped that the matter of asthma accompanying acidosis would be touched upon. The acidosis of children usually appears as the typical cyclic vomiting, or may show respiratory symptoms, not infrequently asthmatic. We have cases where the typical start is asthmatic and then the vomiting comes on. What type is this? Apparently not bacterial, not from inhalation, perhaps it is ingestive, but as the asthma is apparently dependent upon the acidosis, is acidosis a hypersensitization of protein matter? In other words, I want to get at what the speaker knows about asthma in connection with acidosis."

Dr. Fritz B. Talbot, in closing the discussion, said:

"In the first place, with respect to the preparation of these materials with which we make the tests (animal serums), I would say that any one can take some raw beefsteak and squeeze out a drop or two to make a skin test. They can also take some uncooked chicken or lamb and squeeze out a drop or two. It must be fresh, however. The serum can be taken in large amounts and dried under a fan and kept as a dried powder in the office. The pollens may be collected by going out early in the morning, before the dew is off the ground, with a pillow case, shake it onto the pillow case and gather it up and put it into a bottle. A fresh egg, may be broken into a bottle and preserved with a drop or two of chloroform which will sink to the bottom, or, better still, you can put the chloroform in first, then the egg, and cork it and that will keep for four or six months."

So far as milk is concerned, the doctor stated that everybody has milk in the house, but that pure casein is better, and after some further remarks on this aspect of the subject, he went on to say:

"Fruits and nuts can be used from the fresh fruits or nuts. If you desire, you may use orange juice, squeezing out a little bit of the juice. Some of the oily part of a nut may be squeezed out from a freshly broken fragment and applied to the scarification—my earlier tests were made in this manner.

"Vegetables contain about 3% protein while the rest is made up of carbohydrates and salts and water; so you have a very dilute protein in the vegetable, and, therefore, the chance of reaction is diminished by the amount of dilution with the starch. The same is true of orange juice and the other fruits. They are diluted with water; therefore, there is less chance of their reaction, and, for that reason, with the crude materials you may miss many cases that you wouldn't miss with concentrated pure protein.

"In the preparation of the proteins, no chemical should be allowed to remain which will irritate the skin; and, their character should not be changed by the chemical manipulations. I understand that proteins are being made by one of the chemical companies, but, so far as I know, they haven't been controlled sufficiently to warrant their general use.

"Many children—many individuals have hives which are anaphylactic in origin and never develop any symptoms of hay fever, asthma or the other anaphylactic diseases, nor do they transmit the anaphylactogenic tendency to their offspring. The anaphylactic phenomenon must be more pronounced to be of any significance. Asthma is not the earliest anaphylactic phenomenon which is manifested in children. Eczema usually precedes it.

"Lastly, in regard to acidosis and asthma. The term acidosis has been very loosely applied by the press and, I am sorry to say, by the medical public. There are two kinds of acidosis. One is the so-called acidosis which is acetonuria and which is not necessarily true acidosis; acetone is present in the urine in pretty nearly every infectious disease which we have and is of no particular significance. Then there is the true acidosis which Howland and

Marriott reported in the work which they have been doing in Baltimore, which is characterized by a lowered carbon dioxide tension in the alveolar air. In other words, the carbon dioxide in the blood cannot get out through the alveolar air for some reason or other and accumulates in the body. What is the connection with asthma? Acetone is often present in the urine of asthmatics and during an attack there is apt to be a diminished carbon dioxide tension in the alveolar air."

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"THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF NEPHRITIS." *

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THE opportunity which your invitation gives me to go over a subject which is familiar to all of us, the subject of nephritis, its diagnosis, prognosis and treatment, is very pleasant because I shall be dealing with a matter which is not the special interest of any one man, or a special subject of research, but is a matter which concerns every one of us, and is something on which the opinion of any one who has noticed what he has seen is of value if he looks back over any considerable period of years.

Not long ago on a railroad trip I took up a magazine and saw that a well-known humorist had just written an article on "Looking back from fifty years." He was fifty years of age and had taken the opportunity of writing some of his reminiscences, looking back after fifty years. So there is no special reason why I should not look back from forty-eight years and see what I have to say about kidney disease, having reached that age and having been in practice twenty-five years.

Nephritis may be taken as a fairly clear conception, I think, without any subtleties of definition. We exclude the surgical diseases of the kidney, such as hydronephrosis, pyonephrosis, tumors, tuberculosis, and we exclude also suppuration within the kidney itself, either in the form of large foci, such as abscesses, or those more minute foci spoken of as "suppurative nephritis" or "urinary infection," or sometimes, falsely, I think, as "pyelitis" since pyelitis is always part of a general urinary infection, including the kidney itself. All those we exclude and come down to the original disease defined by Bright—Bright's disease of the kidney, acute or chronic.

CAUSES AND TYPES.

As to causes, it seems to me that we know three fairly distinguishable groups, and it happens that those distinguishable groups of causes, corresponding with the pathological types which it seems to me convenient to adopt. The three different causes of nephritis that we know of are: The poisons, such as mercury or arsenic, affecting the tubules largely; the bacteria, especially the streptococcus and pneumococcus, affecting the glomeruli especially, and the arteriosclerotic degenerations which affect the arteries and through them the rest of the kidney.

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Taking those three groups—the tubular, the glomerular and the arteriosclerotic—each of the different causes of nephritis hits one of those: the great poisons hit the tubules, the bacteria hit the glomeruli, and the degenerations, which we call arteriosclerosis, concern the vessels.

I think, as stated this morning in speaking to some of you at the clinic, it is convenient here to follow the divisions established, first by Senator, and, more recently, W. F. B. Mallory's pathology dividing nephritis into *tubular, glomerular and vascular types.* I take that not from any abstract or anatomic basis, but from an autopsy experience of over 1,000 cases of nephritis.

As all know who read the literature on the subject, nephritis has a puzzling and complicated nomenclature. Almost every known clinical teacher has modified more or less the ideas of nephritis given by his contemporaries or those who have gone before him, but the differences are far more in the terms than the clinical facts to which those terms refer. There is very little difference in the main histologic and clinical types.

1. Tubular nephritis is rarely seen. It is almost always acute and almost always due to one of the poisons I have referred to. It is especially seen in suicidal cases where corrosive subliminate has been taken. The degree of degeneration may be intense or comparatively slight. There may be granular or extensive fatty changes in the tubules, while the glomeruli may be nearly unchanged.

2. In acute glomerular nephritis all parts of the kidney are affected, the glomeruli being affected far more than the tubules and vessels. Glomerular nephritis is generally part of a general streptococcus infection. It is to be feared in every severe case of tonsilitis. Medical colleagues of mine have acquired very severe chronic glomerular nephritis as the direct sequel of a simple sore throat. I suppose it is true of most of us that we have made the mistake of regarding sore throat or tonsillitis as mild and local, whereas they are really general serious diseases. Tonsillitis is almost as serious as pneumonia not on account of mortality, but because of the fact that a pneumonia will heal up, while after tonsillitis the patient is often left with some affection of the heart, kidney or other parts nearer the throat which may plague him for a large part of his life. The streptococcus which affects the heart as endocarditis, the joints so frequently under the term acute rheumatism and the brain under the term chorea, this organism which E. C. Rosenow has written so much about recently in connection with gall-bladder disease, appendicitis, dental sepsis, herpes zoster and many other affections, is, I think, the cause of glomerular nephritis.

3. Vascular nephritis is the ordinary nephritis of old people. It is rare to see any elderly person die of nephritis of any type except vascular nephritis; that is, arteriosclerosis, producing a scarred and broken-down kidney. In all of these cases there is general arteriosclerosis as well, but the amount of involvement of the kidney may be altogether out of proportion to the amount of involvement of the arteries elsewhere. It is necessary to distinguish this arteriosclerotic nephritis from slighter degrees of patchy arteriosclerosis within the kidney.

Chronic interstitial nephritis is a rough and ready term, which one may use if one understands by it nothing more than a scarred and shriveled kidney which may be the end result of any of the three types of nephritis which I have described. If a person recovers from a toxic nephritis he may, in the end, acquire a contracted, scarred kidney. If one recovers from acute glomerular nephritis his urine may gradually lose the characteristics of an acute condition, the characteristics of chronic nephritis appear, and, finally, at autopsy, a contracted scarred kidney appears which if one doesn't follow the changes which will lead up to it, one would call chronic interstitial nephritis. Finally, vascular nephritis, if it lasts long enough, causes the same thing. Chronic interstitial nephritis is the end result, therefore, of all types of nephritis, provided they last long enough. It is not a special variety of nephritis. It may result from any type of nephritis and does not cause a peculiar clinical type which you can identify by the urinary findings or in any other way.

In well-marked nephritis, especially if you have this with a low blood pressure, you may well suspect that you are dealing with amyloid degeneration, but you can go no further than that; at least I cannot, though the etiological factors, syphilis, or chronic supparation processes may support our conjecture.

ADOLESCENT ALBUMINURIA.

I shall now speak of the albuminurias, which are not nephritis. The only one of those of importance, it seems to me, is the so-called albuminuria of adolescence, sometimes called cyclic or orthostatic albuminuria, and the frequence of which, without any relation to nephritis, doesn't seem to me to be realized. My colleague at the Massachusetts General Hospital, Dr. R. J. Lee, who is medical adviser now to Harvard University, examines yearly about 700 or 800 freshmen entering Harvard and in a period of three years he has found that about 10 per cent had a well-marked albuminuria, yet among that 70 or 80 men with albuminuria he found only one or two who had a genuine nephritis. That is, in following these men up he found no other changes in the urine, no changes in blood pressure, no changes in the retinae or in the heart which would give us a reason for calling the condition nephritis. There is nothing of any special interest in what I have said in this connection except its bearing upon the commonness of this—that one college boy in every ten should have an albuminuria, discovered by gross tests, not merely by fine tests. It is reassuring that practically none of those cases are nephritis. As one meets such a case one fears that in later years a genuine nephritis will develop. That has never been so to my knowledge, and the experience which I have cited in the case of those college boys supports my own in that respect.

DIAGNOSIS.

The severe case of *tubular nephritis* depends for a diagnosis mostly on a knowledge of the cause. The urine is not characteristic in itself. There may be no urine at all. There may be very scanty urine with a large or a small amount of albumin and with few or many casts. There is nothing characteristic about it. You cannot even be sure in the milder cases that you have a nephritis at all. It is impossible to distinguish the urine of mild tubular nephritis from the urine of passive congestion of the kidney, of anemic states or febrile states or of a great many other miscellaneous conditions in which we find albumin and casts in small quantities. An essential point in our diagnosis is the determination of what poison is going into the body, or being made there, together with evidences of some more or less severe nephritis shown by edema, uremia and by a diminution in the amount of urine.

Acute glomerular nephritis, in my own experience with post mortem work, is one of the most difficult of diagnoses to make. In going over the records of 3,000 autopsies in which we made clinical notes, compared with the post mortem findings, we were wrong in our diagnosis about 75 per cent of the time. Most of those were mistakes of omission. We didn't make the diagnosis when it was there, and as I have been looking back over those cases I have not been able to see how I could avoid the same mistake again. Many of them were terminal affections. But it wasn't because they were terminal and because we did not examine the urine that we did not find them. It was because there was nothing characteristic in the urine or elsewhere. There are no characteristic manifestations of acute glomerular nephritis in most cases. In a small minority of cases there are manifestations which are more or less characteristic. Those are, (*a*) the familiar manifestations of uremia, such as headache, vomiting, convulsions, coma, (*b*) the familiar manifestations of general edema, (c) the raising of the blood pressure and (*d*) the urine. In the urine the most characteristic thing is the presence of blood. The quantity of albumin and the amount or kind of casts isn't anything like so characteristic of this disease as the blood, but in any kidney urine containing a considerable amount of blood we should suspect glomerular nephritis unless there is a lesion in the bladder or a stone or tumor in the kidney. The presence of blood is good evidence of glomerular nephritis and generally of acute and subacute glomerular nephritis. In these cases we see considerable diminution in the amount of urine, but not such extreme diminutions as in toxic tubular nephritis.

One of the things most interesting to me, is the extreme rarity of acute glomerular nephritis of this type; that is, of the diagnosable type. I have said, that most cases we cannot diagnose at all. The next point is that those that can be diagnosed are very rare. In ten years I have been only able to discover two diagnosable acute cases of glomerular nephritis. That many seem like a strange statement. There was a large number of *diagnoses* of acute glomerular nephritis in that time, but at autopsy they were generally found to be wrong; that is, most of those diagnosed as acute were really chronic. Whenever I come into my wards to make a visit and an interne says, "I have a case of acute nephritis," I let him see by the expression on my face that I am very skeptical about it and that it is the biggest wonder of the year. I generally succeed in convincing him before I leave that it is not a case of acute nephritis but a case of chronic nephritis. We have been caught so many times when we made a diagnosis of acute nephritis only to find that it was chronic, that now we are getting more cautious. If we use blood pressure measurements in every case, most cases of supposed acute nephritis—the diastolic and systolic pressure will usually be found to be above the normal limits. That corresponds with what the autopsy usually shows, a markedly hypertrophied heart. It has been said by F. Müller of Munich that the shortest period of time necessary, in his experience, for an hypertrophied heart to develop and the blood pressure to become elevated, is sixty days. We hardly would call a nephritis lasting sixty days acute. Most of the cases, therefore, when more accurately studied, turn out to be chronic and not acute.

In studying the urine in cases of glomerular nephritis, most of them subacute or chronic, as I said, what we observe is something like this: There is blood in the sediment, and that is the characteristic thing. As they go on, the amount of blood diminishes and the fat increases. You go on still further and the casts diminish until in the later years, in the terminal stages of the disease, it may be impossible to find any casts at all. Dr. C. P. Emerson, of the University of Indianapolis, has made the paradoxical statement, which I have verified in my own experience, that it takes a pretty healthy kidney to make many casts. Hence if you find a large number of casts in the urine you can be pretty sure that the kidney is not badly damaged. On the other hand the kidney which is most damaged and in which the greatest number of tubules are affected, is the one giving off the smallest number of casts. The largest number of casts that Emerson has seen was in a case of diabetes with wholly normal kidneys. The largest number of casts that I have ever seen was in a case in which I made a wholly wrong diagnosis. That patient in that case was a sailor who was brought in from one of the ships in Boston Harbor, comatose and without any reliable history. He had fever. He had leukocytosis. He had no paralysis. We drew his urine by catheter, found a very large amount of albumin and the largest number of casts I have ever seen. They were chiefly hyaline, granular and epithelial casts. There was no blood and there were no fatty casts. I made a diagnosis of uremia. The patient died. Post mortem examination showed cerebrospinal meningitis and perfectly normal kidneys; normal macroscopically; normal microscopically. When I was shown to be wrong I pestered the pathologist and got him to put through the sections most carefully. He was able to say to me that he could find nothing wrong with the kidneys whatsoever. I had begun to get skeptical of the value of casts as an evidence of the severity of nephritis before that time. But from that time on my skepticism rapidly increased. Casts are of no value in the diagnosis of renal disease because of the fact that they are found so often in diseases which are not nephritis, and particularly because they are so often lacking in nephritis. Also because we have now so many tests of the kidney function developing of late years which are superior in value to the examination of the sediment for casts. If I had no other reason for examining urine sediments than for the finding of casts I should never examine urine sediments. Since I must examine the sediment for other purposes, it is just as well to examine for casts, but merely for casts I should never examine the urine.

As glomerular nephritis develops we have a series of manifestations in the urine and in the other tissues where uremia is manifested. Taking first the amount of urine: the previously rather small amount increases, especially the nocturnal urination. Normally we pass one pint in the night and two pints in the day. In chronic nephritis, especially chronic glomerular nephritis, this is reversed. I think one of the most valuable signs of chronic nephritis is the measurement of the day and night urine, properly estimated. One distinguishes, of course, this nocturnal polyuria from mere *frequency* of urination which is present, for instance, in cases of hypertrophied prostate. In chronic nephritis the night amount may be twice the day amount, or even greater than that. I always instruct patients to collect separately the day urine 7 a. m. to 7 p. m. and the night urine 7 p. m. to 7 a. m. to measure them, then to mix them and bring me a mixed specimen of the total amount.

With this increased amount at night, goes a progressive fall in the specific gravity. Another point which has interested me very much and which I would like to dwell upon is the *fixation of the specific gravity.* In normal urine, and in the earlier stages of most types of nephritis, the kidney still has the power to concentrate or to dilute the urine. If we withhold water from a patient, the specific gravity runs up 10, 20, 25 points. If we give him abundant water, the specific gravity falls in the same way. But in chronic glomerular nephritis and other types of chronic nephritis the specific gravity becomes fixed in a strange way, so that if you give the patient abundant water you cannot dilute his urine and when you withhold water you can not concentrate his urine. That is noticeable in the two-hour test, having him pass his urine, as far as possible, every two hours during the day time and as frequently as he conveniently can during the night time. This test is of importance, not only because it is reliable, but chiefly because it is both reliable and quick. The element of time consumed in any test is always to be taken into consideration, particularly when we are estimating how much stress we shall lay upon it as a diagnostic measure. Of course, this test can be made by any one, by an office attendant or by any one who knows how to pour urine into a glass and drop a specific gravity bulb into it. Yet it is a very important test.

With this goes, in most cases, a retention of nitrogen, to be tested best by the Folin tests in the blood. The retained nitrogen in normal people is somewhere between 25 and 40 milligrams pr 100 c.c., and in the nephritic cases it runs up to 100, 150 and even 200. This retention is a threat of impending uremia.

With these changes in the urine there come a gradually-rising blood pressure, a gradually-enlarging heart. In some of these cases we have the highest blood pressure readings which we see in any clinical picture.

Some interesting studies have been reported from the Cook County Hospital in Chicago in this matter of acute uremia—the diagnosis of acute uremia, as verified or not verified at post mortem. In their experience, as in mine, the diagnosis of acute uremia is one of the most difficult diagnoses to make. We are often wrong in acute uremia. In chronic uremia, on the other hand, we are almost always right. It has a perfectly clear and distinct symptomatology and at post mortem we are almost always shown to be right. But we are most often wrong in acute uremia because the condition is apt to cause coma. The urine must be taken by catheter and there the mistake comes in which I have exemplified already by the case of cerebrospinal meningitis. The urine in any case of coma is practically certain to contain albumin and casts in considerable amount. If one thinks of albuminuria and casts as important evidence of nephritis, one is going to make this mistake many times. I should never make a diagnosis of acute uremia without evidence outside of the urine—the heart, the subcutaneous tissues (edema), and the history.

Chronic vascular nephritis, the old man's nephritis, is a slow gradual process which, ordinarily, one can watch over for five, ten or even more years. It contrasts in this respect with glomerular nephritis. The urine is somewhat characteristic. The specific gravity is not so low, the nocturnal polyuria not so great, the specific gravity not so fixed, but in other respects it is almost impossible to distinguish it from chronic glomerular nephritis. Age is the chief differentiating point. If you have a young patient with a low specific gravity, nocturnal polyuria and a big heart think of chronic glomerular nephritis: if the patient is old think of chronic vascular nephritis. Another point which helps in this condition is the blood. Anemia is very prone to develop in chronic glomerular nephritis and not nearly so prone to develop in chronic vascular nephritis. The retinae have not served me well as a means of differential diagnosis. Formerly following some of my text books and early teachers, I was led to suppose that retinal hemorrhages were much more common in glomerular nephritis, (ordinarily called parenchymatous), then in vascular nephritis, (ordinarily called interstitial). It is not so: post mortem evidence doesn't back that up.

I have already expressed myself on the question of casts. I want to express myself on the question of urea determinations. I was brought up in the belief that it was most important in cases of nephritis to test the amount of urea. I suppose that was the time when the similarity between the two words urea and uremia conveyed to us the impression that uremia was due to excessive urea in the blood. The amount of urea in the urine depends in part on the activity of the kidney, but it depends a good deal more on other factors, and unless we can determine those we cannot tell anything about urea estimations. It depends primarily on food. Unless you know what food the patient is taking there is no reason for measuring the urea. Secondly, the body weight of the patient and the exercise (which he is taking) must be known and controlled. Thirdly, the bowels: If the bowels are loose he will lose a great deal of urea in that way.

We used to say that the urea-output gave us a rough general idea of the function of the kidney, and I suppose that is true, but we have a much more accurate test of the function of the kidney in the phthalein test. This test is far more important and far more reliable than a study of the albumin, casts and urea, which in my student days we were taught to regard as extremely important. The phthalein test, which we familiarly call the "red test," is familiar to you all. It is important chiefly in its extreme divergence from the normal. A slight divergence from the normal output of phthalein does not mean much. In passive congestion of the kidney the phthalein output may be only 15 per cent. In most cases of severe nephritis the phthalein falls below 10 per cent and below 5 per cent, or, only a slight trace of phthalein may be excreted. In such cases we know that the kidney is not doing its work.

Taking that with the specific gravity, the distribution of the day and night urine and the nitrogen retention, we can get as accurate a measure of urinary function as in any way except by an examination of the output of special substances such as sodium chlorid, which are not available clinically. The things which are available clinically I have just mentioned. They are all quick and simple things to do.

Nothing annoys me more than the case of a patient coming from such sanitariums as the Battle Creek Sanitarium bearing, as they often do, a long and elaborate report, not given to his physician, but to the patient himself, containing an analysis which is absolutely of no use to the patient or anybody else. Those reports make him think he has been very thoroughly examined which may be true, but he has also been very thoroughly fooled. This is a familiar phenomenon, known to all of you, from most of the laboratories where people go for special examinations of urine. It always seems to me a very foolish think to estimate indican, urea, uric acid, etc. Any practitioner of medicine can make a perfectly satisfactory examination of the urine and most of them can be made in five minutes. Never neglect an examination of the patient's urine and in very few cases do not spend more than five minutes upon it. The mistake which I have seen made frequently is either to make a very elaborate examination of the urine or no examination at all. Both of those are equally fallacious. We need waste very little time on the urine if we remember what I said as to making the patient do the work. The patient must do the work of carefully collecting and measuring his day and night urine, mixing the two and bringing you the mixed specimen. In most cases with a specific gravity bulb, a little nitric acid and a flame, you can then finish up a urine test in five minutes. If you have no symptoms pointing toward surgical disease of the bladder and no albumin or sugar in the urine, there is no special reason for examining the sediment unless it shows something in the gross which you have some curiosity about and want to know about. The vast amount of urines show no gross visible sediment. The history tells you there is no surgical disease to be feared, and the albumin test tells you whether you need to look for nephritis—the albumin test plus the specific gravity. The sugar test settles the question of diabetes.

In the methods of investigating the kidney today great progress has been made and they possess the further advantage of saving our time. One of the great things which we haven't thanked the Italians enough for is the introduction of blood pressure machines which we now use and which make a kidney diagnosis a much simpler affair than it used to be.

I would like to pass here a maxim which I have found to be useful. Suppose you are in doubt about nephritis or no nephritis, ask yourself this question: Is it acute or chronic? If acute and if it is diagnosable at all, there are perfectly diagnosable signs in the urine. If chronic it will show in the heart in practically every case and in the blood pressure. Those are easy things. Do not waste too much time in examining the urine, until you have asked yourself this question: Is it acute or chronic.

PROGNOSIS.

With respect to the prognosis of nephritis it is difficult for me to say anything except in general terms. The first thing to be said, I think, is that in acute nephritis one should never give up a case until the patient is dead. I remember a small boy who came in with postscarlatinal nephritis, entirely blind, wildly delirious. Later he lost consciousness and remained in coma without any urine for forty-eight hours; then with a urine looking as bad as any I have ever seen, with convulsions, general edema, anasarca, fluid in the belly, and yet he recovered and staid well. When we run up against such a case as that and see it get well it seems to me that we should take to heart the possibility of recovery.

On the other hand, I suppose it is fair to say that no case of chronic nephritis ever recovered, and I suppose it is fair to say that no case of chronic nephritis ever will recover. It is not possible to find a therapy for chronic nephritis. For it is comparable to a fire or a log which is half burned out. When we learn to put the ashes back into the log we shall learn how to restore the patient with chronic nephritis to health; not before, in my opinion. By preventing diseases of the streptococcus and staphylococcus type we might prevent a good deal of chronic glomerular nephritis from ever developing. Good milk supplies may prevent some streptococcosis. If it develops to chronic glomerular nephritis it will never be curable. That does not mean that we have no therapeutics, but that we have no curative therapeutics. We know that chronic glomerular nephritis, when the eyes are affected, almost always leads to death in twelve months. It is very rare to see a patient with retinitis due to chronic glomerular nephritis live more than eighteen months.

In chronic vascular nephritis life may be prolonged for many years and the patient live a life of considerable usefulness. It is for this reason that I have dwelt so much on what may have seemed a perfectly academic distinction between glomerular and vascular nephritis. It is important for prognosis: it is not important for treatment. Chronic glomerular nephritis generally kills in eighteen months. Chronic vascular nephritis may live many years.

I would like to say just a word, before I go on to treatment, in relation to syphilitic kidney. A woman came to me for swelling of the legs—marked edema, and complained of nothing else. She had no knowledge that she had ever had syphilis. Finding this edema of the legs I suspected the heart, looking for its cause. She had a normal heart. I found no cardiac disease, nor any hypertension. Hence so far as I could see, it was renal edema. The heart was not enlarged. The blood pressure was normal but the urine contained abundant albumen and casts. Then I remembered what the wisest syphilographer of our part of the world, Dr. Post, has said—that when you have edema and urinary changes looking like chronic nephritis, but with a normal heart, always suspect syphilis. I did suspect it in this case, did a Wassermann and found it strongly positive. I accordingly sent her to the man who knows best how to treat syphilis and he cured her. That impressed me because the urine looked so bad and the edema looked so bad that it appeared to be an incurable nephritis, yet the patient recovered. An experience of that kind suggests watchfulness.

Treatment.

So far as the treatment of nephritis goes I doubt if I have anything to offer which isn't familiar to all of you, still I suppose it might be of interest to you to know what we do in our clinic.

Acute nephritis, we treat, of course, entirely differently from chronic nephritis. In acute nephritis if the patients are nauseated or vomiting, as they often are, we make no attempt whatever to get in food. We think this nausea probably represents a wise attempt on the part of nature to get out poisons and prevent burdens on the kidney through food. We do try to get in water and that despite the observation of Van Noörden that sometimes water, in the presence of acute nephritis, is difficult to excrete and puts an extra burden on the kidney. Despite that, owing to our own clinical experience, we give water by rectum; that is normal saline solution, eight ounces every four hours by the drop method, slowly, whereby it can all be retained perfectly well without disturbing the stomach of the patient. In acute nephritis in a patient who is nauseated that is about all the treatment that is necessary unless there is much edema or unless there are other uremic manifestations.

If there is much edema we do to the acute nephritics as to the chronics the thing which is most useful in edema, and that is purgation, and next to that hot air baths. I think it is important to bear in mind the fact that hot air baths are not perfectly safe to give in patients who are not swollen. In edematous patients, however, they do no harm; with no edema they may even bring about death. I have found in our hospital records a rather rueful frequency of the statement, "The patient died in a hot air bath," and I cannot help wondering whether he did not die from the effects of the hot air bath. By giving the patient a hot air bath, sweating out water and nothing else (we have no reason to suppose that the sweat brings out any poisons), we may concentrate in the blood such poisons as were there before. If the patient has edema, if he has hydremia, then we can safely sweat him. We never put the patient in a sweat box for uremia unless he has marked edema. The sweat bath causes something else, and that is a lowering of the blood pressure. Next to bleeding the most effective method of safely lowering the blood pressure is by means of the hot air bath. It is better than any drug. As many uremic manifestations are due to the presence of a high blood pressure we have found that this method of lowering the blood pressure serves us well. We give no drugs addressed to the kidneys and no diuretics, believing they do the kidney harm.

The use of magnesium sulphate in saturated solution, as a purge in the presence of edema is all right, but it may result in the development of magnesium poisoning if it is used in cases where there is no edema.

As to diet. When they get past the stage of vomiting or nausea two important things to do are to exclude substances which put a burden upon the kidney, especially meats, and proteids, and to exclude salt. Exclude salt and most solid foods because they are apt to result in retention.

So far as a milk diet is concerned, I would say that in acute nephritis it is proper. In chronic nephritis it is very bad treatment. Almost every month I see cases of chronic nephritis where harm has been done by a milk diet.

As soon as we get past this stage we add carbohydrates and fats, still keeping the proteids low, but not withholding any one thing. Bread and butter are borne very well and the well-known cereals and sugars are easily taken.

In chronic nephritis efforts to spare the kidney are useless. In trying to spare the kidney you may spoil the patient. That is, we may, by starving him on a milk diet, hurt his general nutrition when it is perfectly impossible to spare his kidney. You can starve a person on a milk diet for a week or ten days or two weeks, but you can't do it for the months and years that you have before you in chronic nephritis. In our clinic in chronic nephritis I always give a full diet except for the reduction of the purin group; I don't believe myself in cutting meat out entirely. I believe they do better with a small helping of meat, about the size of the palm of your hand, once a day. There, again, we come to the old question of red and white meats. I have patients say to me, "My doctor told me I must not take any butcher's meat," by which is meant mutton and beef, whereupon I ask them if the butcher does not handle anything else besides these things, referring, of course, to chicken. It is true there are some slight differences in the finer chemistry of red meats as compared with white meats, but we have no reason to believe that these differences in the finer chemistry make red meats any worse. There is no scientific foundation that I know of which would indicate that they are bad for nephritis or that they are any worse than white meats. I think the empirical basis of this idea is this. If you tell the patient he can eat white meat and nothing else he soon gets sick of eating white meat. We accomplish a reduction of meat in this way without saying so. Aside from this, I believe in abolishing meat soups. They have all the harm of the meat; and none of the good. I exclude salt, not altogether, however, as I believe in permitting it to be used in the food, but such salt as the patient must eat at table. They complain bitterly against a salt-free diet; that is, salt not added to the cooking. However, they get along very well without adding any at table.

We all know, of course, that the action of the skin helps out the deficient powers of the kidney and if the patient is capable of being made happy in an arid climate it is well to send him away to an arid part of this country or to Egypt. The majority of patients, however, object to this and prefer to die at home rather than go to an arid climate.

I suppose you are afflicted, as we are, with people coming around to sell you medicated waters and to tell you about this spring and that spring which is so good for the kidneys, and I suppose you probably get them out of the office as fast as I do with the assurance that there is nothing to these claims and that it is a very foolish thing for people to go to these springs and spend their money in drinking the water.

The heart must be looked after in chronic nephritis. Patients are very apt to get lazy and not infrequently they are encouraged in that tendency by their doctor. The doctor knows their heart is weak, which is true, and he makes the mistake of thinking, because it is weak, that the patient must not use it. The opposite is the case. Patients must use it moderately and persistently and must take daily exercise. They need it just as much as you and I, and if they don't take exercise it is made weaker. Daily exercise is essential for the support of the mucular power of the nephritic heart.

I don't suppose it is necessary for me to say to a group of physicians like this that I do not use drugs to reduce vasomotor tension. Luckily we cannot do it, and if we could it would be harmful. I don't doubt but what most patients with hypertension would die if we reduced their tension to normal. Nitroglycerin will reduce it, but only for a few minutes. So it is my experience with high frequency electricity and other procedures said to reduce blood pressure. They will reduce blood pressure, but only temporarily.. They will reduce a systolic blood pressure, but will almost never reduce a diastolic blood pressure. The diastolic blood pressure is not affected as much by this temporary procedure as the systolic blood pressure, and I think that most of the reputation earned by these high frequency treatments is due to the fact that they are measuring the systolic pressure only.

Gentlemen, I have finished the talk that I had planned to give you. I have said very little, I am afraid, that is encouraging. I have said still less that is new. I do not know of any field of medicine which holds out less in the way of encouragement than the field I am covering tonight. The main thing seems to me to be as clear as we can with respect to prognosis, not to scare these people when you don't know it, and not to feel that the vascular type of nephritis necessarily means that a man must live in a country he abhors and give up all the food he likes to eat. In the vascular type I think we can do something for these people. I don't think they must be seen frequently. I generally try to teach them what I know about the management of the case and I turn them loose. The doctor habit is one of the dangerous habits to acquire, I think, and especially troublesome in chronic nephritis. We don't want ourselves to be made to think of our health and with chronic disease, especially chronic kidney disease, it seems to me we must do what we can to make the patient forget he has the disease. By coming to the doctor he won't forget it. Urine examinations are of no use and will probably show that the patient is getting worse: it doesn't do him any good to know that. And if you don't know it then you don't need to confess it to him.

PYURIA DUE TO DISEASES OF THE KIDNEY.*

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THE subject of pus in the urine is one which is of extreme interest to all genito-urinary surgeons because it is the chief symptom which calls the patient's attention to his bladder, kidney, or urethral condition. It is surprising, however, how frequently a patient will overlook the symptom of pus in the urine and for how many months a patient will go on passing pus in the urine without having his attention called to it unless the symptoms of tenesmus or frequent urination, attracts his attention to his bladder. Very often these cases are only discovered by accident, through examination of the urine, and I think it is very important to make a routine examination of the urine in every case that applies for treatment because some decided disturbance in the genito-urinary tract may be picked up by the finding of pus in the urine.

Now, pus may originate anywhere along the entire genito-urinary tract from the kidneys to the balanopreputial fold. One or two pathologists think they are able to find by microscopic examination from which particular part of the genito-urinary tract pus originates, but conservative men, like Dr. Murray, have always said if they find pus in the urine it simply means there is suppuration somewhere along the genito-urinary tract and where it comes from can only be determined by a systematic examination.

In our systematic examination to determine the origin of the pus we have to exclude the balanopreputial sac, the urethra, the bladder and the kidneys, and it is only by making a systematic examination of all these organs can we be sure we have located the seat of the suppuration.

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* Read before the Brooklyn Pathological Society, March 8, 1917.

Your president has requested me to speak on the subject of pus derived from the kidneys, and to take up that particular branch of the subject will be my task tonight.

Twenty-five years ago the mortality from nephrectomy ranged as high as 50 per cent. Today the mortality from nephrectomy is about 7 per cent, and the reason for this great lowering in the death rate is due to the fact that today we are able to separate the right and left urines by the ureter catheter and determine just exactly what part each kidney is doing in freeing the body from its poisonous substances.

The technique of ureteral catheterization may be very easy, if one has learned the routine method, or it may be extremely difficult, and perhaps impossible. In our post-graduate course at the Polhemus Clinic we expect to teach a man, if he is ordinarily adaptable, to catheterize the ureters in normal cases in a month, and our students usually are able to learn to do it in that time, so that they do not experience very much trouble in using the catheter and drawing off the urines, but every now and then myself and my assistants run up against cases where it is impossible to catheterize the ureters at all. The conditions present as regards the bladder are such that it may be impossible to get enough water in the bladder, the ureters may be hidden by ulcerations or there may be various other physical conditions present which preclude the possibility of catheterizing the ureters, so that not infrequently we come in contact with cases where catheterization of the ureters is impossible.

Sometimes we are able to find one ureter, and get the urine from that side and then when the bladder urine is examined we have a fair idea of what the other kidney is doing.

When we have obtained the two urines, the first question which I generally ask is this, "Is there pus present in one of the urines?" The next question is, "Are there any bacteria present?" and if so, "What bacteria—colon, staphylococcus, or tubercle bacilli?"

Where we find a large quantity of pus coming down from one kidney with a few colon or staphylococci, we have a very simple diagnosis. It is easy to make a staphylococcic or colonic pyelities and from these findings we can practically immediately exclude tuberculosis. Where, however, we have a large quantity of pus without any bacteria at all, we say that that looks very suspicious of tuberculosis because the tubercle bacilli are not easy to find; in fact, sometimes it is impossible to find them at all.

Casts come next in the order of importance. We find hyaline and granular casts where none are suspected, from the parenchyma of the kidney.

Epithelium is more or less present. A considerable amount of squamous epithelium with pus indicates desquamation of the walls of the pelvis of the kidney with chronic pyelitis.

Blood is present in every catheterized specimen and is due to traumatism which cannot be avoided in introducing the catheter into the ureter.

Now, we come to a consideration of the chemical examination in cases of this character, namely, the test of the amount of urea in the right and left kidney urines. For a long time that was the only functional test which we had, or the only guide to the functional activity of the kidneys was the amount of urea which was excreted, and where one ureter showed 8-10 grains of urea and the other showed but 1-2 grains we would say there was good secreting function on the side which showed the more urea.

At the time that we depended on the urea for our findings there were various other methods of determining the functional activity of the kidneys. That was some six or eight years ago. Artificial polyuria was tried out, but was found to be unsatisfactory. Cryoscopy (determining the freezing point of the right and left urines) was tried out in a great many of the clinics and, for want of something better, was used as a control against the urea, but it is very difficult to carry out and very troublesome, so when the present methods of functional kidney tests were introduced they came as a great Godsend to the men engaged in doing genito-urinary work because the present methods are so much easier and simpler to carry out than cryoscopy, polyuria and so on. As a matter of fact the urea test was a good practical test at that time and it remains so today. It is a reliable, standard test and if I had only one thing to go by I would depend very largely on the relative quantity of urea from the right and left kidneys and would seldom go wrong by depending on that as a test.

Animal inoculations play an important part in the question of diagnosis of tuberculosis of the kidney. As I have already said, the tubercle bacilli are very difficult to find. By means of taking the urine in a case of suspected tuberculosis of the kidney and injecting it into the peritoneal cavity of the guinea pig and waiting for a period of three weeks, then killing the pig and autopsying the pig and find the peritoneal cavity of the pig studded with tubercular nodules we are able to make a positive diagnosis of tuberculosis of the kidney. I may say, however, that this method sometimes fails, and, in fact, my friend, Dr. Rathbun, has just told me of a case in which the kidney had been removed for tuberculosis and the guinea pigs which were inoculated failed to show any sign of tuberculosis, but an experience of that kind is very exceptional and, as a rule, we find this method a reliable one in nine cases out of ten.

The disadvantage in connection with animal inoculations lies in the fact that we are forced to wait for a period of three weeks before we are in position to make a positive diagnosis, for it takes three weeks for the tubercle bacilli to develop in the peritoneal cavity of the guinea pig, so that if we had a time-saving method of arriving at a positive diagnosis in cases of tuberculosis of the kidney it would be much better because the patient doesn't want the sword of uncertainty or the surgeon's knife dangling over his head for three weeks; he wants to know immediately what the decision is. However, it is certainly much better to keep him on tenter hooks for three weeks for the sake of being in position to give a positive diagnosis and knowing exactly what we should do in the case rather than to make an error in diagnosis and remove a kidney which is not affected with tuberculosis and which it is not necessary to remove. In all cases where we cannot find the tubercle bacilli (in the urine) I advise the patient to wait for three weeks until we have secured positive information as a result of animal inoculations. In this way we get a line on the diagnosis.

As a test of the functional activity of the right and left kidneys chromocystoscopy is one of the most valuable methods that we have. To determine the function of the right and left kidneys I prefer indigo carmin as devised by Völcker and Joseph some six or eight years ago and this test was used exclusively in all the German clinics at the time that I was over there last. The indigo carmin test consists in injecting a small quantity of indigo carmin hypodermatically. The indigo carmin has the property of being eliminated by the kidneys and a normal kidney will eliminate the indigo carmin in a blue cloud in about eight or ten minutes. If the kidney be diseased, the elimination of the indigo carmin is delayed so that after we have introduced or injected the indigo carmin into the patient hypodermatically we catheterize the ureters or watch the ureter mouths through the cystoscope. If there is a blue cloud which issuing in eight or ten minutes and we watch the other side and the indigo carmin does not appear in the form of a blue cloud for, say, twenty minutes we say that on the latter side the indigo carmin is delayed and there is diminished functional activity of the kidney on that side. When we find delayed indigo carmin, and pus and a low urea we can make a diagnosis of serious disease of that kidney. The particular form of the pus, whether it be the result of tuberculosis, calculus, pyonephrosis or colon infection, must be worked out by other means, but the findings of chromocystoscopy give us a distinct line on the functional activity of the kidney.

The phenolsulphonephthalein test of Rountree and Geraghty is largely used in this country, but I find that more convenient for determining the function of both kidneys together and I seldom use it for the right and left kidney function. The difficulty about this test is that in order to get a correct idea of the functional activity of the kidneys the catheter must be left in place for two hours and that is a rather long time to leave it in the ureter, so that I prefer the indigo carmin because we can have the entire examination completed in from ten minutes to a half hour and the catheters can be removed.

Now the last method of making a diagnosis in conditions which give rise to pus in the urine is the radiograph. The radiograph in connection with other methods is extremely valuable; in fact, without the radiograph we cannot be sure of the presence of a stone, and yet I would depreciate very much the habit of some of the general surgeons of depending exclusively on the radiographic examination, and assuming because the x-ray reveals a shadow in the kidney, that a stone is present, and then cutting down on the kidney and taking the stone out without knowing just what condition the other kidney is in. For instance, the patient may have one kidney with a stone in it and the other one may be in such a state that it is incapable of supporting life; and if a nephrectomy is done for stone in the kidney the man is liable to die. The radiograph has its place as a means of diagnosing stone, but it is something which must only be used in conjunction with other means of diagnosis, namely, ureteral catheterization and the functional kidney tests, in order to obtain the full benefit from it.

Now, the abdominal surgeons, and, more particularly, the gynecological surgeons, are very apt to make a diagnosis after opening the abdomen, whereas the genito-urinary surgeons, particularly in kidney work, must make their diagnoses before operation and must know just exactly what they are going to find before going in, and nine times out of ten their findings are correct, but it is only possible for them to arrive at a correct diagnosis by means of a systematic examination and spending a great deal of time in the study of the individual case preliminary to operation.

Now, with the radiograph we can see shadows of stones in the kidney—and we can in most cases get a dim sort of outline of the kidney which shows whether it is also enlarged or not, and in certain cases we may find a shadow along the course of the ureter and it is a question whether there is a stone lodged in the ureter itself or whether it is a calcified gland in proximity to the ureter. In cases of that type we have a method which consists in introducing a leaded catheter into the ureter and taking a radiograph with the leaded catheter in place, and we can then see whether the shadow is a half inch or an inch away from the leaded catheter or whether it is directly in line, and in this way we are helped out in our diagnosis of ureteral calculus.

Recently we have had another little manipulation which we use in certain cases where the pelvis of the kidney is dilated, known as pyelography, which consists in filling up the pelvis of the kidney through a ureter catheter with one of the silver salts and taking a radiograph after the pelvis of the kidney has been filled in this manner. Sometimes we find simply a normal kidney pelvis with calices of proper proportion size and sometimes we find a great big distended kidney pelvis making a very pronounced shadow on the plate. Collargol was first used, a 10 per cent solution, and while it threw a very beautiful shadow in the radiograph it was found to be very injurious to the substance of the kidney; the kidney seemed to have a selective affinity for the collargol, it would be absorbed by the kidney and would very materially damage the substance of the kidney, so we are now using a 10 per cent solution of thorium, which, so far, seems to have no deleterious effect on the kidney substance at all and at the same time gives a distinct shadow on the radiograph.

(For discussion see page 312.)

PYURIA: DUE TO DISEASES OF THE URETHRA OR ORGANS WHOSE OUTLET IS IN THE URETHRA.

J. Sturdivant Read, F. A. C. S.

HAVING exluded the kidneys and bladder as a source of pus in the urine, there remains the urethra with its glands and crypts and the various organs which have their ultimate outlet somewhere along the urethral tract, namely, the seminal vesicles, the prostate, the epididymi, Cowper's gland. In women the glands of Skene and Bartholin must be remembered as a possible souce of infection. It is well here to remark that specimens of urine from the female must be secured by sterile catheterization to be of any value. Not only is it necessary to determine the anatomical focus but it is also essential to identify the organism.

In the presence of *acute* infection with large amounts of pus, no instruments of precision can be used with safety. Palpation will generally disclose the condition in the prostate, vesicles, epididymi and Cowper's gland. Inspection of the meatus aids in determining the acute inflammation of the urethral mucous membrane and the glands of Skene and Bartholin.

It is the *chronic* conditions in which there is present a small amount of pus, with irregular exacerbations, which tax our diagnostic and therapeutic acumen. A systematic procedure is necessary and such may be briefly described as follows:

Secure the purulent discharge at the meatus or from centrifugized urine and by miscropical examination and cultures identify the organism. It is most commonly the gonococcus, micrococcus catarrhalis, staphylococcus or streptococcus, colon or tubercle bacillus. Occasionally none of these organisms is found, the condition being a result of an irritation of the urethral membrane due to some systemic diathesis. The presence of large quantities of minute crystals, uric acid or calcium oxalate will often disclose the cause and its treatment.

SEARCH FOR SOURCE OF THE PUS.

The anterior urethra:

With a bulbous flexible bougie examine for stricture, submucous infiltrate, or granulations which may be the seat of a catarrhal discharge. With an endoscope the mucous crypts and the openings of Littre's glands can be plainly seen if they are the seat of disease sufficient to produce pus. The opening of Cowper's gland into the bulbous urethra, I have never been able to identify. In the abscence of any discoverable location of pus from the anterior urethra, this must be remembered and if at any time it becomes tender and palpable its destruction by operation may be necessary.

The prostatic and membranous urethra:

Pass a sterile rubber catheter gently into the bladder, having first cleansed the anterior urethra, withdraw the urine and replace with four ounces of sterile saline solution; then order patient to empty the bladder. This washes into a sterile receptacle the contents of the prostatic and membranous parts of the urethra. At a second sitting examine this part of the urethra with an endoscope and cysto-urethroscope, paying particular attention to the utricle and the openings of the ducts of the prostate and vesticles.

STEP III. TO SECURE THE CONTENTS OF THE PROSTATE AND VESICLES.

Wash clean the anterior and posterior urethra with sterile saline solution, leaving in the bladder four ounces of the fluid. Then massage the prostate and vesicles (it is impossible to be sure that their separate contents can be secured) ; catch the drops appearing at the meatus on a slide and culture medium. If none appears, have the patient walk vigorously a few minutes which will often cause the expressed contents to emerge at the meatus. This manouver failing, the passage of the saline solution in the bladder will wash out the expressed prostatic and vesicle contents. The contents of the epididymi can be secured only by exposure of the organ and puncture of the areas of inflammation.

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* Read before the Brooklyn Pathological Society, March 8, 1917.

TREATMENT. FOR FOCI OF DISEASE IN THE ANTERIOR URETHRA.

Dilatations, irrigations, applications (through endoscope) of silver nitrate or tincture of iodine. Pus foci in crypts and glands must be destroyed by insertion of tip of a pointed cautery or electrolysis needle or through a high frequency spark. A suction apparatus for emptying these recesses has been described by a London writer.

Posterior Urethra:

Dilatations, irrigations, instillations. If the utricle is the seat of chronic inflammation direct applications of silver nitrate solution or of the cautery needle through an endoscope under guidance of the eye.

Epididymi:

Puncture of diseased areas or epididectomy.

Prostate:

Massage combined with faradism (one pole in rectum, the other suprapubically), and vaccines. If there is present a calculus or palpable abcess, surgery is indicated.

Seminal Vesicles:

Massage, faradism, vaccines; these failing, open the vas deferens and inject, through a small blunt pointed needle, some abuminate of silver solution—more radical and sometimes absolutely necessary, vesiculotomy or vesiculectomy after the method of Fuller.

The presence of a small amount of pus at the meatus even when proved to be non contagious, may be the cause of considerable mental depression. When the origin is in the prostate or vesicles it may be the source of many pronounced psychic, nervous and sexual disturbances and sometimes of severe systemic poisoning.

(For discussion see page 312.)

THE HISTORIC DEVELOPMENT OF THE CYSTOSCOPE

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PERHAPS no subject in the many branches of medicine and surgery presents a more interesting topic for study than the development of the modern cystoscope.

The innumerable problems and difficulties experienced by the early workers in their attempts for refinement of diagnosis and treatment of genito-urinary lesions comprises a story extending over a period of many years. Over a century ago (1805) a German physician in Frankfort conceived the plan of examining the uretha and bladder through a hollow tube. This method however was very crude, depending as it did, on a mirror from without and using reflected light. Many important modifications followed, principally those of Segelas in 1826, Bombolgini and John Fisher in 1827, Desmoreau in 1863, Cruise in 1865, Stein in 1873 and Grunfeld in 1874. For illumination some preferred gas, others a petroleum, gazogen, or magnesium light. This method was only applicable to the female and extremely limited owing to collapse of bladder walls and urinary leakage. Nevertheless, urethroscopy was being done with some satisfaction and it is surprising what complete pictures were described in the early days and long before the advent of the incandescent lamp. The endoscopic pictures were quite as accurate as the knowledge of pathology at that time permitted.

In 1867 Dr. Julius Bruck, a dentist in Breslau, had been using a glowing platinum loop heated by the galvanic battery to illuminate the aural cavity. This was cooled by a stream of water passing through the instrument. This method suggested to the mind of Dr. Max Nitze, a possible means of application to the bladder. So he set about to devise a suitable instrument constructed after the manner of a hollow sound with this form of illumination. He began in 1876 and after working for sometime with the aid of Mr. Joseph Leiter, an expert instrument maker, he devised a telescope system to overcome the narrow field of vision. This he presented to the profession of Vienna in 1879, having tried it out thoroughly in Von Dittel's clinic. The first Nitze-Leiter instrument proved complicated and cumbersome, because of the unusual size and the cooling attachment required. Furthermore the goose quill window particularly when subjected to a considerable degree of heat proved a marked hindrance to vision. Later, however, a plate of rock crystal 2 m.m. thick replaced the quill until finally the incandescent lamp completely changed the instrument.

As early as the year 1870 surgeons were attempting to devise methods of collecting specimens from the ureters. In 1874 Tuchman succeeded in compressing one ureter by means of forceps inserted through the urethra of the female. The same year Heger tried tying one ureter per vaginam to permit obtaining separate specimens. A year later Gustav Simon of Darmstadt catheterized ureters by blindly working with one finger in the vagina as a guide to find the mouth of the ureter. It is interesting to note that Simon in 1869 was the first in Europe to excise a kidney. A similar method of introducing catheters was done by Pawlick in 1886 with the patient in the knee-chest position.

Among the earlier simple methods worthy of note is that of Heusner who depended upon ureter compression from without by means of his specially made abdominal belt. By thumb-screw pressure he claimed to be able to shut off the ureteral flow by force directed at the side of the fifth lumbar vertebra. The center of the pad being placed two finger breadths above the umbilicus, the inner edge of same being one finger breadth from the mid-line to right or left, according to side of desired pressure. In order to obtain separate urines, segregators were also devised and subsequently modified and improved upon. Some depended on the principle of raising a ridge on the floor of the bladder between the ureter orifices; others by forming a poorly fitting partition inside the bladder. Among the more useful of these were those of Luys, Harris, Guyon and Cathelin.

In 1876, catheterization was performed for the first time by visual inspection by Grunfeld working through the endoscope tube, manipulating the catheter both outside of and along the tube.

It remained for our own distinguished Dr. Howard Kelly in 1893 to perfect the endoscopic catheterization of ureters in the female with air inflation of the bladder, the light coming from without by means of a mirror. This method has been improved upon by him and is still largely used in this country. Brenner was also one of the pioneers in this work. In the early eighties general anaesthesia for cystoscopy was the rule owing to the imperfect and impractical technique.

In 1880 Thomas A. Edison patented his incandescent lamp and it was found possible by Newman three years later to apply it to the cystoscope. This converted it into a simple, small, accurate, scientific instrument, devoid of cooling devices and hot wires, and subsequently to be perfected into a truly wonderful diagnostic aid.

In 1885 Boisseau du Rocher used an indirect or right-angle view instrument of a similar type. *In 1887* the Nitze-Leiter type for both direct and indirect use was presented. This marked the first really useful observation cystoscope and embodied the basic principle of all the many modern modifications. There were two models; a direct view having the lamp on the convexity of the beak through which could be seen the base of the bladder, the trigone and ureter orifices, and the indirect with the lamp on the concavity affording exploration of the upper four-fifths of the bladder. The clinical application of this instrument was rapidly taken up so that within a year or two excellent diagnoses were reported by Nitze, Fenwick, Wallace and others. Cases of stone in the bladder, tumor, tubercular ulceration and trabeculation were accurately described and cases of hematuria were differentiated as to their vesical or renal origin.

In 1889 Brenner added a single catheter channel to Nitze's instrument with direct view affording unilateral catheterization for the first time in the male and for the first time with satisfaction in the female. The same year Boisseau du Rocher, whose name should be no less prominent than that of Nitze, applied his "composite" cystoscope. This consisted of two separate parts, a sheath and a telescope, the latter being removable to afford vesical irrigation and equipped with means of catheterizing two ureters synchronously without withdrawal of the instrument. To Rocher belongs the honor of this valuable addition to Nitze's observation instrument. He also had two types; one for direct, the other for indirect views. Nitze did not catheterize ureters with an instrument of his own make until five years later. This was equipped with but a single catheterizing attachment.

Innumerable additions and modifications by a host of excellent workers have succeeded in perfecting the many types of modern cystoscopes. Among those not previously mentioned are Gueterbock, Albarran, Koch, Preston, Casper, Loewenstein, Lang, Tilden Brown, Bransford Lewis, Kollmann, ,Wossidlo, Bierhoff, Schlagintweit, Young, Kolisher, Cabot, Baer, Freudenberg, Otis, Pilcher and many others. The leading contributions after Nitze and Rocher were: Albarran in 1897, who applied his movable lever or "elbow' 'a most useful means of controlling and manipulating the catheter within the bladder. This is an essential part of every modern catheterizing instrument. Schlagintweit in 1903 used the first retrograde vision instrument which facilitated in many cases examination of the vesiral neck and prostatic region. This contained a movable lens which Dr. Hugh Young modified the same year with a flexed-prism retrograde lens. Dr. William K. Otis of New York in 1905 for the first time modified the ocular apparatus of Nitze's instrument. He replaced the prismatic lens with an hemispheriral lens. The importance of this change is indicated by the field of vision being four times greater than that of the prismatic lens.

The history as outlined above simply attests the fact of what Nitze himself originally said to the Medical Society in Vienna, "Between the conception of an instrument and its practical completion, there is a long and different path."

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THE X-RAY PICTURE AS AN AID TO THE EARLIER DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS.

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No one realizes better than the speaker the great amount of material written and published concerning the early diagnosis of pulmonary tuberculosis. His excuse for adding to this amount is first, its great importance to the patient physically, economically and socially, and second, any aid which the clinician can receive either from the laboratory worker or the roentgenologist which will help in the diagnosis before the lung parenchyma is involved is of the utmost importance.

Incipient pulmonary tuberculosis is defined by the National Association for the Study and Prevention of Tuberculosis as follows:

Slight or no constitutional symptoms (including particularly gastric or intestinal disturbance, or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent. Slight infiltration limited to the apex of one or both lungs, or a small part of one lobe. No tuberculous complications.

To the skilled clinician a case presenting itself for diagnosis with the above findings in connection with a suspicious history and the use of the auscultatory cough, no difficulty in making a diagnosis should be encountered, because the lung parenchyma has already been attacked, and we have the sputum. If we wait for the appearance of sputum with or without the tubercle bacillus the infection has become a mixed one, and we have waited too long. From the standpoint of the patient the stigma of tuberculosis has already been put upon him.

By making use of the x-ray as a diagnostic agent, however, such a patient can oft-times be saved from incipiency as outlined above. Given a case with a suspicious tuberculous history, including loss of appetite, weight and strength, lassitude, possibly slight acceleration of pulse or elevation of temperature, but slight or no cough and no clinical signs, if other diseases can be excluded this case calls for a stereoscopic x-ray picture of the lungs. Such a picture will likely reveal bronchial gland disease and definite hilus infiltration with possibly old calcified foci scattered about.

Gancher in 1890 described in detail the clinical symptoms which give rise to a suspicion of developing lung tuberculosis, previous to the appearance of dullness or rales, as well as tubercle bacilli in the sputum. This he called the Germination Period.

The enlarged tuberculous bronchial glands, by reason of their close association with the hilus, make the root of the lung the starting place of the tuberculous process. Osler says, "It is sometimes difficult to determine in a section through the affected lung where the caseous glands terminate and where the lung tissue begins." Apical tuberculosis is therefore secondary to the process at the hilus, and this point has very definitely been settled by the roentgenologists.

It might not be amiss to mention here Hamman's "Explosive Type" of pulmonary tuberculosis. In this type of disease a patient may have had for a varying period a history of beginning trouble as above described. As no signs can be elicited clinically no one can say that the case is tuberculous and little or no treatment is given. Suddenly the patient is taken with what is called the "grippe" there is cough, temperature, general muscular pains, prostration.

All the classical symptoms of influenza are present. When the fever subsides the cough remains, expectoration follows, and on clinical examination, these cases are found to have extensive lung involvement, beyond that found in the incipient stage. Fully 50% of the acute onsets of pulmonary tuberculosis are of this "explosive type."

This is the kind of case where the roentgenologist can give such valuable help, as bronchial gland tuberculosis and hilus infiltration are undoubtedly present and would also have been found had an x-ray picture been taken at the first hint of pulmonary disease.

Because of the expense involved in an x-ray outfit, the amount of space it requires, and the technical skill needed to produce and interpret an x-ray plate, the services of a skilled roentgenologist are required to determine whether or not the patient presenting himself to the clinician is to be declared to be in the Germinatoin Period or "Pre-incipient" stage, if I may use that term.

Fluoroscopy. Where the expense involved in picture taking would be an item to be considered, the fluoroscopic examination could be done, the objection to this form of diagnosis being that the exposure is but a fleeting impression and not a permanent record.

The above remarks are based upon a clinical and roentgenologic study carried on at the Municipal Sanatorium, Otisville.

In this study which included only negative sputum cases with a history of incipiency as above described, we found in every case, hilus infiltration, bronchial gland disease and scattered calcified nodes, and few if any manifestations clinically, of parenchyma involvement.

We therefore were led to conclude that a means has been found by which an earlier diagnosis could be made before lung disease is established, and that this means is composed of three factors of:

1. A good history.
2. A thorough clinical examination.
3. A stereoscopic x-ray picture.

EDITORIAL

NEW REQUIREMENTS FOR POLIOMYELITIS.

WEEKLY Bulletin No. 24 of the New York Department of Health contains the new procedures and requirements observed in all cases of poliomyelitis. The experience of last summer proves how necessary it is to take all possible precautions against the spread of this disease, of which, in spite of our enormous clinical experience, we are still woefully ignorant. The Department of Health have gone extensively into the subject in a series of monographs dealing with the epidemiology of the disease and deserves credit for the efforts that it has made along the various lines of both prevention and control. The regulations already referred to are too extensive to be quoted in full and too important to be digested. It would be well for every one, professional and layman alike, to have these requirements brought to his notice in advance of any possible repetition of last summer's experience.

H. G. W.

TYPHOID FEVER.

THE Weekly Bulletin of the Department of Health recently reported a series of cases of typhoid fever involving seven of the fourteen residents of a two-family house. The initial case was reported on March 22 and the others continued to fall sick until the 11th of April. The original infection could not be traced, but investigation showed that the remaining cases were explicable by reason of the use of a common toilet in the cellar, which was unsanitary and defective. The Department very properly calls attention to this outbreak as emphasizing the importance of immunization against typhoid fever and showing the necessity of active co-operation between the attending physician and the health authorities. Incidentally this local outbreak calls attention to the appearance of typhoid fever at an unusual season of the year; while figures are not at hand to substantiate it, there is a distinct impression that typhoid is appearing much more frequently during the winter months than was formerly the case. If it is true that the total number of cases as gauged by hospital practice is slowly but steadily diminishing, it is equally true that the typhoid season is not so well marked as formerly. It would be interesting if one could search out the reasons for the appearance of winter epidemics of typhoid. Of course, it requires no extended search to explain such a localized outbreak as the one in question, but the appearance of scattered cases throughout the city at a season when the domestic fly is usually dormant will remove at least a part of the evil reputation that it at present carries. Possibly unsuspected typhoid carriers are the most likely source of winter outbreaks of the disease. It is well worth while at this time to again emphasize the need for physicians to be more assiduous in spreading the gospel of typhoid immunization. It has become a matter of routine in the military service, it is recognized as efficient and sought for by travelers, but the vast bulk of the fixed population have not yet been educated up to demand it. In discussion with the variety of people who have at one time or another been immunized, it is interesting to note how few have had severe reactions and how many have had none at all; now and then a patient will be found who confesses to a severe reaction of each of the three injections, but these cases are surprisingly few. The tendency to postpone until a convenient time whatever is not immediately urgent is the probable reason why so many people go unvaccinated, but a little systematic effort on the part of the doctors would soon get the custom well established and typhoid fever would be practically wiped out. The strides in that direction that have already been made are truly impressive. The significant absence of the disease in both Army and Navy and its practical disappearance from the armies now in the field are in such sharp contrast to its general prevalence in the Boer War and the Spanish-American War that one would think no added arguments in its favor were required, and yet year after year goes by and the precious lives are sacrificed among the civil population; lives that could be saved, homes that could be preserved with just a little forethought and insistence by the family doctor. Time goes on and the profession remains passive; the matter will doubtless be taken up by the Public Health Authorities and the doctors will have another cause of offense to proclaim. At this season, when so many families are leaving for the country, physicians should be more than ever alert to see that they have met their responsibilities by urging upon all their patients the wisdom of a series of prophylactic injections. H. G. W.

CHAPTER 431.

ALTHOUGH there have been previous whispers, it was not until July 14th that official notice reached the general profession, at least in Brooklyn, of the changes in the Public Health Law known as Chapter 431 of the Laws of 1917. As the law became effective on July 1st, practically every physician in the state is liable for not having registered previous to that date. The new law adds an increased burden in the form of a tax masquerading as a charge for special forms required for the purchase of narcotic drugs. It is a notable fact that very few physicians were aware that these changes in the law were even contemplated, as is shown by repeated inquiries received by the Journal within the last few weeks. As one reads the draft of the law, one is impressed first of all with the additional restrictions placed upon those who are best qualified to use drugs and the practical freedom which is still granted to the purveyors of nostrums. It is absolutely unfair that a physician after four years of prescribed study which he is not permitted to enter upon until he has fulfilled the broad requirements of the State Board of Regents as a preliminary, and which is usually supplemented by a year or more hospital experience, backed by the license to practice which is granted after a searching examination and upon the payment of an ample fee, should be the butt for increased restrictions and special taxes, while any unqualified person may take a trade name and market. without restriction, "habit forming drugs," put up in an attractive way. The plea of course is that the public has the right to purchase what it pleases provided it knows what it is purchasing. The real reason for the exemption of the nostrum mongers is not far to seek and can be explained by any practical politician in one word.

This Journal has repeatedly urged the necessity for a paid Legislative Bureau at Albany to safeguard the interests of physicians before the Legislature. It was hoped that the broader powers conferred upon the Legislative Committee of the State Society would be adequate to bring about a more effective administration of the important function intrusted to it, but it is evident that what is intrusted to an unpaid committee of doctors cannot be handled with anything like the business efficiency of the man who is paid for his job and who knows that he loses his job if he fails to make good.

Along these same lines of thought lies the case of Dr. James F. Kirk, who was arrested on the 15th of June for failure to keep a public record of the amount of morphine prescribed by him during the last two years. It has been estimated that this would equal 1/5 of a gr. a day. Dr. Kirk must answer in court for his failure to keep a written record of those very things which the State of New York licensed him to do when it accepted his license fee to practice medicine; but no cognizance is taken of the fact that one bottle of ordinary cough syrup a day would equal, if not exceed, the amount of morphine that the doctor used. One has only to figure how many bottles of cough syrup are sold in the State of New York to realize the scathing injustice of a law which limits the legitimate practitioner of medicine and penalizes him for lack of book-keeping, but permits the indiscriminate sale of many thousand times the amount of the same drug by wholly unqualified dealers. The argument has been raised in Dr. Kirk's behalf that this action on the part of the State controverts the well-recognized principle of the sanctity of privileged communications between physician and patient. But there is a deeper principle than that which underlies the whole matter and that is the essential unfairness with which the laws of the State of New York regard physicians. It is publicly acknowledged that the object of these laws is to curb the use of habit-forming drugs and to protect weaklings from contracting the drug habit. It has been proclaimed by the advocates of these laws that the blame for the drug habit does not rest upon physicians, with rare exceptions; but the only practical application of the law is to work injustice through increased taxes and the curtailment of existing privileges upon reputable physicians, while it totally ignores the real offenders. It has been publicly stated by those who were responsible for the Boylan Law that many drug habitues had gained their habit through proprietary articles containing narcotics, and yet no practical restrictions have been placed upon these preparations—why? If physicians who are especially qualified to use narcotics and who are acknowledged to be practically blameless in causing the large consumption claimed, are to be further restricted and taxed, the inference is plain that in common fairness **all** who deal in the use of narcotics of **any kind** must be equally restricted. Consider the folly of a law which compels the practicing physician to pay a dollar to the United States and another dollar to the State of New York for the privilege of writing a prescription on a blank of required type for four ounces of Stoke's Expectorant containing five drams of paregoric, equivalent to one and one-third grains of opium, but which permits any druggist to sell the same preparation without prescription! The same inconsistency holds true for Syrup of White Pine Comp., a specious name for a syrupy vehicle practically inert except for the morphine or heroin that it contains. Check up the physicians' prescriptions for narcotics against the sale of proprietary nostrums dependent upon narcotics for their effect and learn who the real offenders are. It is utterly unreasonable that druggists, dentists, veterinarians and physicians should be selected to increase the revenues of the State at the expense of those rights which have been guaranteed them in their licenses while the patent medicine man sails along doing untold damage without restriction. The Medical Society of the State of New York has had abundant opportunity to prove what it can do for the benefit of its members and each year adds a signal failure to produce anything except added restrictions on practice.

It is now time for the bulk of the medical profession to seriously consider how they may regain the rights guaranteed them under their license to practice medicine, how properly to limit the pernicious activities of the various fakirs who are constantly edging in and how best to unify their efforts so as to offset the constant tendency displayed by the State to limit every practical capacity for earning a livelihood commensurate with their real importance in the community. It is decidedly noticeable just now that physicians are being called upon for public service in the Army and Navy; the time is ripe for them to exact from the State a definite recognition of their importance that is just as real in times of peace as it is now when war is on us. H. G. W.

CORRESPONDENCE.

DEPARTMENT OF HEALTH
City of New York
Office of the Commissioner

Haven Emerson, M.D.
Commissioner.

July 18, 1917.

My dear Doctor Webster:

In the past six weeks the Products Disposal Company, with whom the City of New York has a five-years' contract for the removal of dead animals from the streets, has lost many of its regular employees to the recruiting officers, especially in Brooklyn. A number of failures to live up to contract were noted. The officers of the company were called before me and warned that their contract would be void if they did not improve.

The removal of dead animals is not done by the Health Department, but for the City on contract. The primary notice, except when received from a citizen comes from the patrolman or district street cleaner on the block, each of whom is required by his respective department to notify at once his precinct station or district office. The call is promptly forwarded to the Products Disposal company. If the citizen and the patrolman did their service promptly and accurately, by reporting, the company would serve the City better.

Don't let your genius at rendering attractive the pleasant art of "knocking" your hired servants carry away your better judgment. You know as well as I that the removal of dead cats has little or nothing to do with the morbidity or mortality rates of New York City.

I agree that the Department of Licenses (Commissioner George H. Bell, 49 Lafayette street) might, with great advantage, decline to issue permits for the "music manglers" at any time of day.

Let the physicians of any borough get a one hundred per cent record in diagnosing and reporting communicable disease, as required by law, and people will be so happy and healthy that they will not let a little thing like a smelly cat get on their nerves and they will become charitable and admit that infallibility is not necessarily acquired simply by accepting service for the city.

Very truly yours,

H. EMERSON,
Commissioner.

July 20th, 1917.

Dr. Haven Emerson,
Commissioner of Health,
New York City.

My dear Dr. Emerson:

Thank you for your letter of July 18th.

When I wrote the comment on the failure of the Department of Health to promptly remove the extremely dead cat, I was not aware that the Products Disposal Company were the responsible people. I had gathered that the Offal Dock to which my complaint was referred by the operator of Brooklyn headquarters was, if not a part of the Health Department, at least under its immediate jurisdiction; I am glad to be set right in the matter.

One point in my criticism seems to have escaped you and that is the failure of coordination in the city work. In this sort of nuisance it would seem logical that the Department of Street Cleaning, which cares for the removal of garbage and other perishable material, should also be responsible for the prompt removal of the small dead animals rather than permitting them to remain until the employees of the Contracting Company can be brought to the spot. I am, of course, ignorant of the administrative reasons for the present arrangement, but it impresses me as a poor one.

One must recognize the full justice of your last paragraph. It would be most desirable if one only could recognize in its beginning every case of communicable disease and by reporting it check its spread; even so one may be permitted to doubt whether the resultant health and happiness of the community would raise them beyond the recognition of unpleasant odors. It might condone them, but they would still be there. You didn't smell my cat.

Yours very truly,

HENRY G. WEBSTER.

Society Transactions

TRANSACTIONS OF THE BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting of March 8, 1917.

The President, Robert F. Barber, in the Chair.

See pp. 296 and 300.

Symposium on Pyuria.

Dr. Richard W. Westbrook: "I have been impressed with the precision of the diagnostic work done by the urologists and was very much interested in the statement made by Dr. Morton that the mortality in nephrectomy had been reduced from 50 per cent to 7 per cent by careful methods of preliminary estimation of the kidney function. I do not know how far back that 50 per cent mortality may have been; I presume quite a number of years back, as it was a very large mortality. It is extremely interesting to know that it has been so greatly reduced, which is really a great triumph.

"I was rather hoping that Dr. Morton would say a little more about the vaccine treatment of pyelitis and the milder pus infections.

"The case that Dr. Rathbun showed on the screen, which I had something to do with, was a very interesting case to me and I am sorry I cannot throw any further light upon it. This was a peculiar condition pointing to an iliopsoas abscess with very marked flexion at the thigh. The history I thought doubtful, the family physician saying he had suspected that urine had come from this slowly-developing tumor below Poupart's ligament, on the top of the thigh. When the case came into my hands, feeling rather skeptical about the urinary aspect of it, I injected bismuth paste into the sinus and found that some of it came through the urethra, so I called Dr. Rathbun in to go on with the ferreting out of the cause of the man's trouble. I am still suspicious that there might have been some bony lesion in the pelvis, possibly tuberculous in character, although the x-ray picture didn't show anything and observation failed to help us. I have never known a psoas abscess to perforate into the bladder."

Dr. James T. Pilcher: "It is always interesting to have the opportunity of listening to men of such extensive experience in this line, and it brings up a few technical points that have occurred to me which might be of interest to you.

"I was quite surprised to learn Dr. Morton's position relative to the difference between the interpretation of the results obtained from the indigo carmin test and those obtained from phenolsulphonephthalein. In our experience we have used the phenolsulphonephthalein and the indications of the relative efficiency of the kidneys with that is similar to those obtained with the indigo carmin test, usually occurring in about eight or ten minutes. For the purpose of continuing to get a definite time efficiency of the kidney, the cystoscope is purposely removed and the catheters are allowed to remain in the ureters, they do not seem to cause any particular discomfort, indeed in many cases of pyuria in certain clinics, particularly the pyuria that accompanies pregnancy, the catheters are left in the ureters, draining the pelvis of the kidney, for several days at a time without any particular trouble to the patient.

"I have been interested in the past few weeks in running a series of experiments with phenolsulphonephthalein recovering it through the ureteral catheters for fifteen minutes and then multiplying that factor so as to get a two-hour aggregate, then subsequently, on the next day, taking the patient's urine for a two-hour test by passed specimens, it was very interesting to find that the efficiency of the kidney was practically the same through the ureteral catheters where the factor had been multiplied and that computed from the passed specimens for two hours. Further evidence may be obtained by those who have not the facilities for ureteral catheterization work and the more detailed diagnosis in cases of tuberculosis of the kidney, and that is due to the fact, as was shown very prettily in the slides which Dr. Morton showed, that there is frequently a deposit of calcium phosphate where we have tuberculous destruction of the kidney, and in many of these cases one can get very definite shadows in the kidney substance particularly in the parenchyma rather than the pelvis, as is outlined in the radiograph, and one is quite justified in inferring that tubercular degeneration is present rather than stone formation, as stones very infrequently form in the parenchyma or toward the periphery of the kidney.

"Only yesterday I saw a case of pyuria which was of a class which Dr. Rathbun I do not think mentioned directly. A patient had pneumonia and dilatation of the bladder, subsequently she had been catheterized by the physician three or four times and suffered a consequent cystitis, for which the physician irrigated the bladder with a 1-2000 sublimate solution, and immediately set up a terrific cystitis as a resultant of which she is throwing off of large quantities of pus due to the irritation, and exfoliating the bladder as the result of chemical irritation rather than to any particular pyogenic infection."

Dr. Robert F. Barber: "I would like to ask Dr. Morton in closing the discussion on pus from the kidney if he will answer three questions. What is the factor which determines whether or not the kidney should be removed in a case of operation on the kidney for stone, what he considers a kidney to be left behind, what he considers a kidney to be removed, and how much of the parenchyma still intact will permit of a kidney being left behind with a reasonable degree of safety? In cases of pus in the urine from renal sources, what percentage of tuberculous cases show a secondary invader, such as the staphylococcus or pyocyaneus or colon. Whether or not in contemplated operations on tuberculous kidneys he would be willing to operate on a case in which the diagnosis had been made by the microscope alone, without the added confirmation of the guinea pig."

Dr. Henry H. Morton: "I would like to say, in answer to the question asked by Dr. Westbrook respecting the mortality from nephrectomy, that I stated that the mortality originally was 50 per cent when we first began to do it. That dates back, oh, to 1860 or 1870 when the German surgeons were the first to remove kidneys. Before that time the kidney was regarded as something which we must keep our hands off of, like opening the peritoneal cavity in the pre-aseptic days. The first series of cases was a very small one, operated on by the German surgeons, and the mortality ran very close to 50 per cent. The explanation for this high mortality lay in the fact that the cases operated upon were desperate ones. Both kidneys were involved, no aseptic precautions were taken, many of the patients died from sepsis and those that were operated upon should not have been subjected to operation. In some cases the only kidney that was functionating was taken out. I can now recall a case which I saw in my earlier days, of tuberculosis of the kidney which serves to illustrate the point which I am trying to make. The patient was a man with tuberculosis of the kidney, pus in the urine, etc. The tuberculous kidney was enlarged and could be felt on palpation. I did not operate on him, but a nephrectomy was done by one of the best surgeons in New York City. The operation was done very well, but the patient never passed a drop of urine for twenty-one days and at the end of that time he died. The autopsy showed that the surgeon had taken out the only kidney that was functionating. There were many instances of that kind at that time, and the patients were deprived of the only functionating kidney that they had and death ensued as a result. That is the reason why in the early days of operations on the kidney the mortality was so high and it was due to the fact that we are able to determine the capacity of the kidney which is to be left behind to support life, that the mortality has been reduced to about seven per cent.

"As far as treating cases of pyelitis with vaccines is concerned, I would say that I have had very little experience along that line. Of course, it is unnecessary to say that a stone in the kidney which is continuing to cause suppuration should be removed in order to stop the suppuration. In a case of tuberculosis of the kidney the whole organ must come out in order to prevent the possibility of infection arising in the other kidney. A case of simple catarrhal pyelitis due to staphylococcus or streptococcus infection can be treated by washing out the pelvis of the kidney through a ureteral catheter with a nitrate of silver solution with good results, and vaccines might help. I am rather skeptical as to the influence of vaccines in many conditions. I believe that where it is possible to have a direct attack upon a diseased organ through surgery or manipulation it is much better to attack it directly and not waste time with vaccines.

"In regard to the phenolsulphonephthalein test: I tried to make plain why I prefer indigo carmin to phenolsulphonephthalein in determining the function of the two kidneys was because we are able to remove the catheters from the ureters just as soon as we get a blue swirl, whereas in order to carry out the thalein test it is necessary to leave the catheter in place for two hours in order to estimate the percentage excreted during the first and second hours.

"The doctor states that he does not see why any harm can come from leaving a ureteral catheter in place two hours or longer. Perhaps no harm will come of it and in pathological cases it is an advantage to leave the catheter in place for some time. In the last number of Surgery, Gynecology and Obstetrics a gynecologist reported some cases of pyelitis in pregnant women who were improved by constant drainage, the drainage being carried out for several days by leaving a ureteral catheter in place and draining the pelvis of the kidney. It is an advantage to leave a catheter in place and drain in pathological cases or cases of infection of the pelvis of the kidney, but in cases which are not infected and where the pelvis of the kidney is healthy. I think it is desirable to get out as soon as possible after we have found out what we are after. That is the reason why I prefer indigo carmin to phenolsulphonephthalein.

"As Dr. Pilcher stated, some of these cases of tuberculosis with calcareous deposits of salts around the foci of tuberculosis on taking a radiograph show spots looking like stones—shadows cast by these deposits. That is interesting in a diagnostic way and every fact that we can add to our knowledge of the case is interesting and, very often, useful; but I would not make a diagnosis of tuberculosis merely because the radiograph shows a few shadows in the kidney. I want confirmatory evidence.

"With regard to the staining of the pus with methylene blue I would say that I shall have to ask the laboratory man to answer that question. I believe pus is pus, whether it be from the pelvis of the kidney or bladder. I believe it all looks alike; in fact, that is the statement which Dr. Murray has always made—it is impossible to tell whether the suppuration is in the kidney or the bladder from an examination of the pus in the urine.

"Dr. Barber asks as to what our guide is in taking out a kidney which has been damaged by the prolonged presence of stone. I would say in answer that that is a matter of individual judgment. I think that we have become more conservative in the matter of leaving kidneys in as we grow older in operative work. If we can leave in a kidney which is capable of doing some work and we find the general condition of the kidney to be pretty fair and do not fear a secondary hemorrhage or suppuration, we can, I believe, leave some of them in, but sometimes I have left kidneys in and have had to take them out subsequently because of the presence of secondary hemorrhage and sometimes I have found it necessary to remove the kidney because of the occurrence of suppuration. It is a question of individual judgment at the time of operation.

"There is one advantage in leaving a kidney in. The kidney which I showed on the screen there was entirely disorganized and it was necessary to remove it at the time. The patient made a good recovery in that case. Sometime later I met one of the genito-urinary surgeons of New York City and he asked me if I remembered the patient and I said I did, whereupon he informed me that the patient had come to him with a stone in the remaining kidney. He did a pyelotomy on him and the man died. So if there is enough kidney substance left and it is worth while to leave the kidney in, it is better to conserve that much of the body tissues.

"Dr. Barber asked if there were other bacteria found in the urine in cases of tuberculosis. If a mixed infection has occurred we do find colon and stuph but in examining these cases of tubercular pyelitis we generally find a large quantity of pus cells free from bacteria and we may be successful in finding the tubercle bacilli,, we may have to search a long time for them, and if we can not find them animal inoculations show their presence.

"Dr. Barber wanted to know if I would be willing to operate on a kidney after the finding of tubercle bacilli by the microscope. In answer to that question I would say that that depends entirely upon who finds them. If Dr. Murray were to find them the answer is yes, and in that case I would be perfectly willing to go ahead and take the kidney out. However, if some other pathologist were to report the finding of the tubercle bacilli microscopically I would have my doubts and would hesitate very much to remove the kidney in that particular case. I would want it checked up by another pathologist or would want confirmatory evidence in the shape of animal inoculations, or both.

"I was very much interested in that little arrangement which Dr. Rathbun showed us on the screen. It was very, very graphic indeed and I think that every student text-book should have that. A glance will show just what is to be looked for and it is a great help to a man who is just beginning his urological work."

Dr. Henry H. Morton: "I would like to correct one impression which I have perhaps inadvertently given to Dr. Rathbun and it may be that it has impressed some of the other men the same way. I refer to the matter of the indigo carmin test. There are two ways of using that particular test. One of them is to watch the ureter mouth for the blue spurt. That can be done. That is interesting, but it is very hard to sit with your eye glued to the cystoscope watching for the blue spurt for a period of ten minutes. I do not do it in that way. I collect the urine with a ureteral catheter after injecting the indigo carmin and in about eight or ten minutes in a normal kidney the urine which trickles down through the ureter catheter is colored blue, whereas with an abnormal kidney the blue is delayed. After we finish our examination and have taken the catheters out we have enough in the two bottles to examine for pus, blood, urea, etc. and still have sufficient urine left with which to inject a guinea pig."

After some further remarks on the advantage of the indigo carmin in the matter of experiments on the guinea pig in connection with tuberculosis of the kidney, Dr. Morton stated that he simply wanted to correct the impression which he thought may have been created in the minds of those present as to the method of using the indigo carmin test.

Dr. Nathaniel P. Rathbun: "I have just a few words to say. I wish to compliment Dr. Morton on his presentation of the part of the program which was allotted to him and particularly upon his final summing up of the whole situation..

"Dr. Read brought up the question of tubercle bacilli being found in the urine in patients in which the genito-urinary tract is not involved. That does occur. It is a well-known fact that many forms of bacilli may be filtered through the genito-urinary tract and be found in the urine. As the doctor pointed out, the presence of pus is an important factor in the diagnosis." After referring further to this subject and particularly to the question of pus in urine which is sterile in connection with the question of tuberculosis, the doctor went on to say that one of the hardest diagnoses to make is that of tuberculosis of the kidney. Continuing along this line, the doctor went on to say:

"Until very recently I relied a great deal upon the guinea pig and do yet, but, as I was telling Dr. Morton, we had a case of tuberculosis of the kidney, in which the kidney was removed and inoculations were carried out on three different guinea pigs, one of which died of some intercurrent pyogenic process, while the other two lived for six weeks and were then killed and autopsied and were found to be free from tuberculosis, yet at operation the kidney was found to be almost entirely destroyed by tuberculosis.

"The question of the functional tests of the kidney is a large one indeed. While I hesitate to differ with the man who taught me most of my urology, I think that thalein is simpler and easier carried out than indigo carmin. In the indigo carmin test where you see the blue spurts coming from the ureter you have estimated the kidney function, whereas with the thalein test it is an easy matter to get the specimen of urine, the percentage of urea, pus and the other points which we are in search of.

"My own system is this: "Catheters are introduced in the ureters and allowed to drain into two tubes. The patient is asked to drink several glasses of water and in five minutes I will have enough urine in my tubes. The thalein is then injected intramuscularly and at the end of five minutes the tubes are taken away, and we then take the time of the first appearance of the thalein. We can then determine the other points which we are in quest of in connection with the test. The thalein appears in five, eight or nine minutes in a normal case. We very rarely have to wait fifteen minutes. If it doesn't appear in fifteen minutes I feel satisfied that the kidney function is seriously damaged. The catheters are allowed to remain in the ureters about twenty minutes and at the end of that time we inject 1 c.c. solution of argyrol in each kidney pelvis.

"I feel that the time of the first appearance of the thalein associated with the specific gravity of the urine, and the blood urea, together with other tests, is of considerable value, particularly in prostatic cases.

"I think Dr. Phillips makes a very important point in the question of staining the specimens of urine, it is so easy to pass over the presence of pus in the urine. Very often we send urine to the laboratory and the report comes back 'Few W. B. C.' That doesn't mean much of anything. The urine of all female patients contains that. It may mean pus or it may not. You must look at your own specimen of urine. When white blood cells become pus is always a question. Another factor, I think, is that in cases of bacteriuria you must make a stain smear of the centrifuged sediment. The pathologist reports back that the stain contains the usual few white blood cells and a lot of granular detritus. You stain the specimen and find quite a few white blood cells and myriads of bacteria. I fell down on a case of that kind once.

"I think there are cases of pyelitis which are not tubercular and are not due to stones and are amenable to forms of treatment other than surgical. I have recently had a case of colon bacilli pyelitis due to stricture of the ureter, and in that case the ureter was dilated. You know that it is possible to dilate the ureter to 16 or 18 French and irrigate the pelvis of the kidney with argyrol. I recently had another case of pyelitis occurring in the only kidney a lady had. The other kidney had been removed a short time before for stones. It produced pusy urine from that side. I feared she had calculi on that side. The x-rays which were taken were found negative and the wax-tipped catheter was negative. The kidney was well and she is now entirely well. I irrigated the kidney pelvis through a catheter.

"On the question of stone in the kidney Dr. Morton has taken a conservative attitude. I take a rather radical attitude. I believe that with a kidney showing the presence of gross infection, provided, of course, that we are sure of the condition of the other kidney and its function, it is a more conservative and a safer procedure to take the kidney out, Dr. Morton has seen so many cases where he has attempted to conserve the kidney and a recurrence has taken place. Incidentally, I think they should all be taken out by pyelotomy. Nephrectomy I regard as extremely dangerous. That procedure should be confined to cases where there is not much disturbance of function and where the kidney has a single stone or two or three discreet stones. Those cases, I believe, are better treated by nephrectomy."

Dr. J. Sturdivant read: "I want to make one point which has come up about finding the tubercle bacilli in the urine. Sometimes in a case of phthisis the urine will be examined and a guinea pig inoculated and tubercle bacilli proved to be present in the urine. There is no indication for renal surgery unless there is pus present. The point which we should remember is that if we find tubercle bacilli in the urine and no pus, there is no need to consider doing anything more than our general hygienic measures, for the kidney may excrete tubercle bacilli without themselves being damaged."

MEETING OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND, MINUTES OF THE JUNE MEETING.

THE Fifty-eighth Regular Meeting of the Associated Physicians of Long Island was held at Ward's Rest Inn, Centreport, L. I., Saturday, June 16th, 1917, and was attended by eighty-eight guests and members. The only drawback to the meeting was the fact that the train schedule in force curtailed our stay at this most ideal spot so much that it was impossible for those who went to fully do justice to the numerous chances for entertainment offered by the Entertainment Committee, and this was especially the case with regard to the very good dinner. Among the amusements were games of quoits, archery, target practice, base-ball and a spirited contest at clay pigeon shooting, during which some of the clay pigeons were hit. Dr. G. W. K. Schenck of Far Rockaway, one of the famous crack clay pigeon shots of the country, generously supplied his private outfit of guns, clay pigeons, trap and attendant and thus generously contributed toward the social success of the meeting. The dinner was started with a toast to the President of the United States, all rising.

The short business session was opened by the President, Doctor J. Carl Schmuck, who read a letter of regret from the Hon. Theodore Roosevelt.

The Membership Committee then presented the following names which the Association voted to add to its roster:

Proposed by Royale Hamilton Fowler.

John Andrew Gildersleeve, 1337 Seventy-first Street, Brooklyn; Physicians and Surgeons, New York, 1912.

Proposed by William Metcalf Stone.

Cornelius Edward Walsh, 93 Amity St., Flushing; McGill, 1907.

Proposed by W. H. Pierson.

W. Taylor Chamberlin, 125 Washington St., Hempstead; Hahnemann, Philadelphia, 1898.

Proposed by Albert M. Bell.

George H. Humphreys, 46 Jeffrey Ave., Jamaica; Physicians and Surgeons, New York, 1908.

Frank D. Scudder, Locust Valley; Physicians and Surgeons, New York, 1914.

Proposed by Howard T. Langworthy.

Christian Oswald Joerg, 12 Schermerhorn St., Brooklyn; Leipsic, 1870.

Proposed by Lefferts A. McClelland.

T. Campbell Takami, 176 Washington Park, Brooklyn; Cornell, 1908.

Nejib George Barbour, 293 Henry St., Brooklyn; Beyrout, 1887.

Herbert Leonard Langer, 102 Linden Ave., Brooklyn; Physicians and Surgeons, Baltimore, 1914.

Proposed by James Cole Hancock.

Horace Greeley, 140 Clinton Street, Brooklyn; Long Island College Hospital, 1903.

Stanislaw Joseph Alkier, 301 Broadway, Brooklyn; University of Vermont, 1890.

Proposed by Howard T. Langworthy.

Edward Tinkham Gibson, 57 Halsey Street, Brooklyn; Physicians and Surgeons, New York, 1877.

Proposed by Benjamin White Seaman.

Arthur Chalmers Martin, 131 Hempstead Avenue, Lynbrook; Cornell, 1908.

The Secretary read the following which was endorsed and ordered incorporated into the By-Laws:

At the Fifty-seventh Regular Meeting of the Associated Physicians of Long Island held in Brooklyn, January 27th, 1917, Doctor William Browning moved, and the motion was seconded and carried, that it be left to the Board of Directors to create a special class of membership for those of our older and worthy members who feel the necessity of retiring from Active Membership, and that this motion be regarded as a notice that, at the June, 1917 Meeting, he would move to amend the By-Laws so as to embody this change.

To comply with the terms of this motion the Board of Directors recommends that from this date (June 16th, 1917) Article VI, shall be as follows:

ARTICLE VI.

Section I. There shall be three classes of membership in the Associated Physicians of Long Island, namely: Active Membership, Emeritus Membership and Honorary Membership.

Section II. New (Active) Members shall be admitted only upon the recommendation of the Membership Committee and by a two-thirds ballot of those present and voting at a regular meeting of the Association.

Emeritus Members may be selected by the Board of Directors of the Association from among the older, worthy members who find it inconvenient to maintain active membership in the Association. The members so selected shall become Emeritus Members by a two-thirds vote of those present and voting at the next following regular meeting of the Association after their selection. No annual dues shall be required from Emeritus Members.

Names to be acted upon for Honorary Membership may be proposed from the floor at any regular meeting of the Association and a unanimous vote of those present and voting shall be necessary for election to Honorary Membership. No annual dues shall be required from Honorary Members.

Members of all classes shall receive notices of all regular meetings but only Active Members shall have the privilege of voting at these meetings.

Section III. Every applicant for Active Membership shall sign the printed application blank and accompany the application with the current annual dues when the application is received before the June meeting. If the application is received after the June Meeting, and before the October Meeting, it must be accompanied by half the annual dues. Application received after the October meeting must be accompanied by the current annual dues and the applicant will be credited with having paid dues for the following year, subject, always, to any action concerning dues taken b ythe Association at the next Annual Meeting.

Section IV. The name of every applicant for membership shall be sent to all members of the Association at the time of sending notices of the meeting at which the application is to be acted upon.

(Signed) JAMES COLE HANCOCK,
Secretary.

MEMBERSHIP LIST OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND

A

Abbott, Royal Albert, 1391 East 21st Street
Abbott, William Henry..1242 Pacific Street
Ackerman, Stephen H. 1414 President Street
Adams, Henry Frederick, 32 Palmetto Street
Addoms, Lewis P.......278 Halsey Street
Adlerman, Louis....400 Rockaway Avenue
Adlerman, Theodore Davis, 910 St. Johns Place
Ager, Louis C.........137 Clinton Street
Alkier, Stanislaw Joseph....301 Broadway
Allen, Herbert C.......171 Lefferts Place
Allen, William T...........676 Park Place
Anderson, Alexander L..467 Ninth Street
Anderson, Charles A....252 Garfield Place
Anderson, Herbert C...386 Clinton Street
Anderson, Lewis N....526 Bedford Avenue
Anderson, Samuel F.....838 Union Street
Andresen, Albert Frederick Ruger, 219 Berkeley Place
Andrew, James H....500 Madison Street
Apfel, Harry....327 Pennsylvania Avenue
Aronson, Henry...........496 14th Street
Arrowsmith, Hubert....170 Clinton Street
Aten, William H........71 Gates Avenue
Atwood, A. Dalton..980½ DeKalb Avenue

Adams, Robert A........Whitestone, L. I.
Ambler, Alfred S....College Point, L. I.
Ames, James S............Bablyon, L. I.
Andrews, B. S.................Islip, L. I.
Auger, Henri M., (Emeritus), 5 John St., Jamaica

B

Bacon, Charles B........Blackwells Island
Bailey, Fred DeForrest, 260 Hancock Street
Baker, John L.....331 McDonough Street
Baketel, H. Sheridan......54 Sidney Place
Baldwin, Joseph S....493 Classon Avenue
Baldwin, L. Grant..28 Schermerhorn Street
Barber, Calvin F..57 South Oxford Street
Barber, Robert F.......40 Hancock Street
Barber, Vincent.....269 Arlington Avenue
Barbour, Nejib George..293 Henry Street
Barnes, Harold L.........42 Elton Street
Bartley, Elias H., 65 South Portland Street
Bartruff, George L..473 Evergreen Avenue
Bauer, John Leopold, 984 Bushwick Avenue
Bauman, William Joseph 120 Dikeman Street
Bayles, Havens Brewster 125 Seventh Avenue
Beach, Ralph M.......61a Seventh Avenue
Beasley, Crawford D......Greene Avenue
Beatty, George E., Jr......1458 35th Street
Bedford, Edwin R......1142 Dean Street
Beers, Nathan T........97 Gates Avenue
Beery, Edwin M........118 Gates Avenue
Bell, Alfred.............559 Decatur Street
Bell, Harold K......825 President Street
Bell, Henry E........359 Sterling Place
Bell, Robert J..........38 Eighth Avenue
Bellows, Charles M..433 Nostrand Avenue
Benanti, Salvator......185 President Street
Benoit, H. Wright......144 Lefferts Place
Berendsohn, Rudolph......1331 9th Street
Berendsohn, William A., 598 Carlton Avenue
Berlenbach, Philip H.. 9 Stuyvesant Avenue
Bermingham, Francis H., 120 Montague Street
Berry, Charles White......572 47th Street
Bierbauer, Bruno W., 47 Pierrepont Street
Bierwirth, Julius C......253 Henry Street
Blackman, William W..519 Clinton Avenue
Blackmar, Bruce G..331 Ovington Avenue
Blaisdell, Silas C......15 Palmetto Street
Blatteis, Simon R..350 New York Avenue
Bliss, R. Franklin......23 Seventh Avenue
Block, Siegfried.......848 Greene Avenue
Bodkin, Martin L......290 Clinton Avenue
Boehm, J. B..........Greenpoint Hospital
Boes, William........200 Graham Avenue
Bogart, Arthur H......27 Seventh Avenue
Bogart, J. Bion........463 Clinton Avenue
Bonner, Adolph........421 Grand Avenue
Bookbinder, J..........76 Suydam Street
Bornmann, Alfred....438 Greene Avenue
Bottaro, Gaetano.......334 Clinton Street
Bozenhardt, William F..50 Forest Avenue
Brader, William B..1120 Bushwick Avenue
Bradner, Frank W....82 Saratoga Avenue
Bradner, Morris Renfrew......L. I. C. H.
Braislin, William C....425 Clinton Avenue
Brennan, Thomas M....441 Clinton Street
Brickerhoff, Walter J., 180 Willoughby Avenue
Brinsmade, William B....200 Hicks Street
Brockway, Perle B...629 Eastern Parkway
Brockway, Robert O....67 Hanson Place
Brothers, Samuel F..96 New Jersey Avenue
Brown, Charles A......135 Halsey Street
Brown, Francis X......8217 22nd Avenue
Brown, Frank E.......591 Hancock Street
Brown, Thomas E.....278 Clinton Street
Browne, Waldemar T....67 Hanson Place
Browning, William......54 Lefferts Place
Brundage, Albert H.....178 Quincy Street
Bruning, Henry F.........467 75th Street
Brush, Arthur C., 29 South Portland Avenue
Bryn, Harold...........313 Union Street
Buist, George L........3 Hancock Street
Burford, Mortimer G..522 Bedford Avenue
Burger, Francis J......41 Buffalo Avenue
Burkard, George.....1516 Greene Avenue
Burnham, Clark........182 Clinton Street
Butler, Glenworth R....226 Gates Avenue
Butler, William E......260 Ocean Avenue
Buys, Thomas A.......707 St. Johns Place
Byington, Roderick......1851 84th Street

Bantz, Walter G. 805 Hatch Ave., Woodhaven, L. I.
Baker, Alfred Edwin, 672 Walnut St., Richmond Hill, L. I.
Baker, William A...............Islip, L. I.
Baldwin, Lester Cass, Centre Moriches, L. I.

Barker, Herbert L........Woodside, L. I.
Barnes, Irving F......Oyster Bay, L. I.
Barnhardt, William Newton, Central Islip, L. I.
Barry, John H., 153 11th Street, New York City
Baum, Joseph, Sheridan Boulevard, Far Rockaway
Belden, Charles K., 28 Clinton Ave., Jamaica, L. I.
Bell, Albert M............Sea Cliff, L. I.
Bellows, William Sanford, 82 Bergen Ave., Jamaica, L. I.
Benjamin, Frank Everett, Shelter Island, L. I.
Bennett, Winfield Scott..Patchogue, L. I.
Biegeleisen, Joseph Z., South & Wyckoff Sts., Jamaica, L. I.
Black, Robert A........Hot Springs, Va.
Boettiger, Carl, Queen's Plaza Court, Long Island City
Bogart, Joseph H............Roslyn, L. I.
Boorom, Hartley E., Rockville Centre, L. I.
Borland, Harry L........Lynbrook, L. I.
Bray, Dallas G., 451 Grand Ave., Astoria, L. I.
Braynard, Edwin C., Sea Cliff Ave., Sea Cliff, L. I.
Breed, Nathaniel Perkins, Douglas Manor, Douglaston, L. I.
Brennan, Francis E., 256 Barclay St., Flushing, L. I.
Bulson, Devillo N. Rockville Centre, L. I.
Burnett, William J.......Cedarhurst, L. I.
Burns, Geoffrey Charles Henry, Central Islip, L. I.
Burns, James E...........Glen Cove, L. I.
Burton, Samuel Lawson, 4 Church St., Richmond Hill, L. I.

C

Callaghan, David E., 180 Clermont Avenue
Cameron, Irving Gaumott, 274 Halsey Street
Campbell, Charles A..98 Norman Avenue
Campbell, Walter J......384 Union Street
Campbell, William Francis, 394 Clinton Avenue
Candidus, Eugene W., 770 St. Marks Avenue
Cardona, L. John....804 Lafayette Avenue
Cardoza, Abraham L., 635 St. Marks Avenue
Carey, John J............287 Hoyt Street
Carmel, Benjamin E....46 Boerum Street
Carpenter, Frank E...688 Madison Street
Carroll, Arthur L......188 Adelphi Street
Cary, William H..15 Schermerhorn Street
Catlin, Arnold W......207 Greene Avenue
Cauble, William C..1614 East 18th Street
Chapin, Edward..21 Schermerhorn Street
Chapman, William L., 114 Lafayette Avenue
Chase, Walter B..........986 Park Place
Child, Augustus Louis, 424 Hancock Street
Clark, Frank H.......758 Putnam Avenue
Clark, George Armon....407 Ninth Street
Clark, Raymond.......310 Clinton Avenue
Clark, Tracy E..........85 Halsey Street
Clarke, Albert Lincoln..100 Nassau Avenue
Close, Stuart..........248 Hancock Street
Cochrane, Frank Lawrence, 703 Sterling Place
Cohen, Louis Lippman, 760 Bushwick Avenue
Cohen, Nathan....428 South Fourth Street
Colgan, John J.........191 Nassau Street
Collins, Burnett C..645 St. Marks Avenue
Collins, John J..........1349 Dean Street
Colson, John D.......919 Bedford Avenue
Connor, Maurice E....1320 Carroll Street
Cooley, James Allen....552 Pacific Street
Cornwall, Edward E.....1218 Pacific Street
Cosgrove, James E., 5416 Fort Hamilton Parkway
Coughlin, Robert E........428 47th Street
Cox, Charles N......257 Jefferson Avenue
Crane, Claude G......121 St. James Place
Cross, Frank B.......832 President Street
Cruikshank, William J., 102 Fort Greene Place
Capron, Arthur J., Glenmary Sanatorium, Owego, N. Y.
Carman, Edwin............Freeport, L. I.
Carter, G. Herbert......Huntington, L. I.
Casselberry, John Logan, 1213 Hatch Ave., Richmond Hill, L. I.
Chalmers, Thomas C....Forest Hills, L. I.
Chamberlin, W. Taylor 125 Washington St., Mempstead, L. I.
Child, Frank S.........Port Jefferson, L. I.
Clark, Charles Edward....Hewletts, L. I.
Clarke, Louis V.......Far Rockaway, L. I.
Cocke, William I..Port Washington, L. I.
Cole, Chester W.........Oyster Bay, L. I.
Combes, Abbott C........Elmhurst, L. I.
Conolly, Joseph Bartholomew, Glen Cove, L. I.
Cook, William H., 2402 Silver St., Ridgewood, L. I.
Cooke, Tyler Gibson, 827 Stoothoff Ave., Richmond Hill
Cooley, James B.,..........Mineola, L. I.
Corcoran, David........Central Islip, L. I.
Corwith, Silas R............Bellport, L. I.
Courten, Henry C., 923 Church St., Richmond Hill
Cox, Lester L.........Locust Valley, L. I.
Crawford, James J., 311 Gamma Place, Glendale, L. I.
Cunningham, Bertram L., 1211 Van Wyck Ave., Jamaica, L. I.

D

D'Albora, John B....83 Clermont Avenue
Dalton, Eugene Smith, 694 East Fifth Street
Dangler, Henry W.....455 Classon Street
Dattelbaum, Maurice J..345 Stone Avenue
Davis, William Henry, Hotel Theresa, 7th Ave., & 125th St., N. Y.
Deeley, George E....132 Montague Street
De Forest, Henry P., 59 West 54th St., New York City
De Lancey, Charles H., 186 Prospect Place
Delatour, H. Beeckman, 73 Eighth Avenue

De Long, William A., 170 Bainbridge Street
De Lorme, Murrett F..70 Greene Avenue
De Mund, John E., Hotel Margaret, Resigned Dec. 31, 1917
De Nyse, Percy L.....681 Hancock Street
De Waltoff, Dayve........451 47th Street
Dexter, Thurston H..411 Hancock Street
De Yoanna, Gaetano....565 Henry Street
Dickert, John G.....928 Bushwick Avenue
Dickinson, Robert L..168 Clinton Street
Dilberger, Henry J., 138 Prospect Park West
Di Leo, Emanuele..139 Montrose Avenue
Ding, George H...........511 75th Street
Dixon, Herbert S.......141 Lewis Avenue
Dixon, Thomas..........367 Fulton Street
Dobkin, Nicholas......182 Vernon Avenue
Dougherty, John E..Greenpoint Hospital
Dowd, James B., Ft. Hamilton P'kway & 42nd St.
Downey, James M......381 Clinton Street
Doyle, Francis J..........151 Hull Street
Doyle, George J....287 Clermont Avenue
Driscoll, Joseph Alexander, 97 Park Avenue
Drobinsky, F. Ignatius, 697 Fourth Avenue
Du Cret, Herbert Sperry, 169 New York Avenue
Duffield, Warren L....119 Berkeley Place
Duggan, Homer V....955 St. Johns Place
Duncan, Cameron....18 Clarkson Avenue
Durham, Roger............322 Park Place
Durkee, John W.......142 Clinton Street
Durrin, William C......1215 Dean Street
Dusseldorf, Louis M....392 Union Street
Davis, Milton B..........Patchogue, L. I.
Dean, Julien...............Freeport, L. I.
de Graffenried, Anthony Foster, Bell Ave., Bay Side, L. I.
De Lano, Frank T...Rockville Centre, L. I.
Dick, John F., 227 Sanford Ave., Flushing, L. I.
Dickson, David Judkind..Woodside, L. I.
Dietrich, Albert E.........Bay Shore, L. I.
Dildine, Frank C.....Port Jefferson, L. I.
Dold, William E., River Crest, Astoria, L. I.
Dorman, Franklin Abbott....Orient, L. I.
Doubleday, J. Stewart......Quoque, L. I.
Doughty, Isaac L., 12 Vine St., Corona, L. I.
Dow, Horace D............Maspeth, L. I.
Dowsey, George H......Great Neck, L. I.
Duggan, Edward F....Valley Stream, L. I.
Durand, A. Walter, 95 William St., New York City
Durgin, Delmar Dennis, Central Islip, L. I.

E

Eastmond, Charles.......92 Gates Avenue
Ehrhardt, Charles F......146 Maple Street
Eichacker, Henry Charles, 2355 Putnam Avenue
Eichacker, Henry F.....716 Seneca Street
Elliott, Frederick Estabrook, 232 77th Street
Emery, Z. Taylor, 66 Broadway, New York City
Enger, Anton...............4 First Place
Ennis, William Murray.....31 First Place
Enright, Maurice......903 Greene Avenue
Erdmann, Adolph F......458 Ninth Street
Estabrook, C. R....9320 Flatlands Avenue
Evans, George A......909 Bedford Avenue
East, Charles..............Eastport, L. I.
Edwards, David........Easthampton, L. I.
Elliott, Robert M., Willard State Hospital, Willard, N. Y.

F

Fairbairn, Henry Arnold, 249 McDonough Street
Fankuchen, William......270 Hart Street
Fawcett-Shaw, William, 320 New York Avenue
Fett, Herbert C......593 Carleton Avenue
Fettes, David S............1402 Avenue P
Fielding, George B......350 Ninth Street
Figueira, Mathias...14 Stuyvesant Avenue
Finch, William Y..124 St. Marks Avenue
Finkelstein, Reuben, 1592 Eastern Parkway
Fisher, Charles M, 262 Ovington Avenue
Fisher, George Garthwaite, 317a Halsey Street
Fisher, Louis....132 Pennsylvania Avenue
Fisher, S. Lloyd....2911 Clarendon Road
Fiske, Edwin Howe, 152 Lafayette Avenue
Fiske, E. Rodney........1172 Dean Street
Fitzsimmons, James Cleland, ... 451 Gold Street
Fleming, James W...471 Bedford Avenue
Flyer, Irving............5626 15th Avenue
Fogarty, Thomas L..9 Prospect Park West
Fowler, Royale H..280 Jefferson Avenue
Fowler, Russell S.....301 DeKalb Avenue
Fox, James W............418 54th Street
Franciscus, Henry..718 Bushwick Avenue
Freeman, William H., 263 Arlington Avenue
Frei, Emil..............24 Linden Street
French, Thomas R...150 Joralemon Street
Frischbier, Otto G..690 Bushwick Avenue
Fuhs, Jacob...............871 Park Place
Fulda, Carl........1179 Bushwick Avenue
Funk, Merton Layton, 654 East 17th Street
Faller, George W.......Oyster Bay, L. I.
Fensterer, Gustav A.....Floral Park, L. I.
Finch, Frederic Arlington, Amagansett, L. I.
Fincke, Harry Stark, 655 Academy St., Astoria, L. I.
Fisher, Henry Archbold, 25 Bergen Avenue, Jamaica, L. I.
Flemming, Edward A., 213 Cedar Ave., Richmond Hill
Fletcher, Frederick W....Freeport, L. I.
Flynn, Timothy J., 19 Hardenbrook Ave., Jamaica
Folger, Rupert..........Whitestone, L. I.
Foster, J. Mansfield..Valley Stream, L. I.
Foster, W. E................Babylon, L. I.
Freitag, John Daniel, 9 Waterbury Ave., Richmond Hill
French, Harold Milne.....Freeport, L. I.
Frey, Walter G., 205 Grand Ave., Astoria, L. I.
Furman, Isaac Jay......Kings Park, L. I.

G

Galloway, F. Maxwell..156 Windsor Place
Gardiner, Charles E., 27 Schermerhorn Street
Gardner, Willis Morton, 491 Greene Avenue
Garlick, Ralph H..........476 73rd Street
Geis, Norman P........1325 Pacific Street
Genthner, Philip J........384 Court Street
Gibson, Edward Tinkham, 57 Halsey Street
Gibson, Gordon..........176 State Street
Gildersleeve, Charles P., 18 Schermerhorn Street
Gildersleeve, Donald Maurice, 11 Schermerhorn Street
Gildersleeve, John Andrew, 1337 71st Street
Gillen, Andrew M.......4201 12th Avenue
Gilligan, Alexander..404 Franklin Avenue
Gilmartin, Albert E....570 Leonard Street
Gilmartin, Howard A., 81 Norman Ave., Resigned Dec. 31, 1917
Gingold, David......119a Sumner Avenue
Giovinco, Calogero....175 Central Avenue
Gissel, Henry William....1557 69th Street
Gissler, Edwin Fred......32 Cedar Street
Given, James B..........463 Ninth Street
Glynn, James P..........474 Ninth Street
Glynn, John G......1634 East 14th Street
Goldstein, David.....332 Sheffield Avenue
Goodfellow, Eugene H..5708 14th Avenue
Goodrich, Charles H......280 Park Place
Gordon, Charles A....847 Putnam Avenue
Gordon, Mark..........321 Stone Avenue
Gordon, Onslow A......71 Halsey Street
Gordon, Onslow Allen, Jr.71 Halsey Street
Goubeaud, Henry J..518 Carlton Avenue
Graham, Henry F........474 First Street
Graham, John Cooper......319 73rd Street
Grant, Walter S....378 McDonough Street
Gray, R. C............198 Greene Avenue
Gray, Robert H........768 Halsey Street
Greeley, Horace........140 Clinton Street
Green, Edward Everett, 456 Washington Avenue
Griffin, Edwin Albert..165 Hancock Street
Griffin, John............45 Lefferts Place
Griswold, William Church, 78 Prospect Park West
Gutman, Jacob......867 St. Marks Avenue

Gallant, A. Ernest....Forest Hills, L. I.
Garvin, William C.......Kings Park, L. I.
Geis, Joseph A., 2342 Summerfield St., Glendale, L. I.

Gibbons, Rupert Vincent, Oyster Bay, L. I.
Gibson, Horatio Gates, Jr., Central Islip, L. I.
Gibson, William B......Huntington, L. I.
Goldberg, Abraham, 624 Boulevard, Rockaway Beach, L. I.
Golding, Joseph Edward, Roslyn Heights, L. I.
Goodwin, Norman C., 3308 Ridgewood Ave., Richmond Hill
Grimmer, Roy D........Hempstead, L. I.

H

Hagan, Cornelius E., 461 Ridgewood Avenue
Hall, Charles H....2933 West 16th Street
Hall, Gordon R........164 Clinton Street
Hall, Robert W......750 East 18th Street
Hamilton, John Cowle..6120 20th Avenue
Hamlin, Cyrus........102 Hancock Street
Hamlin, George D....1259 Pacific Street
Hancock, James Cole, 135 Cambridge Place
Hangarter, Andrew Henry, 168 Stagg Street
Hansen, Anthony Hans...1830 84th Street
Hargitt, Charles A., 17 Schermerhorn Street
Harman, Eugene Paul, 563 St. Marks Avenue
Harnden, Frank.......495 Eighth Avenue
Harrington, Burt D....525 Ocean Avenue
Harris, Burton........475 Greene Avenue
Hartung, Emil F........358 Marion Street
Haupt, William C......979 Lorimer Street
Hawley, George R......203 Gates Avenue
Hayman, Abe........73 McKibbin Street
Heeve, William L....138 Hancock Street
Helprin, Benjamin Edel, 1501 Eastern Parkway
Hendrickson, Skidmore, 1275 Bergen Street
Henry, Morris Walgrove, 664 East 18th Street
Hermann, Solomon......4903 14th Avenue
Herriman, Frank R.....169 Quincy Street
Herriman, Rudolph F., 1075 Bushwick Avenue
Hettersheimer, Charles J., 309 Wyckoff Avenue
Heuser, Gerhard W., 560 McDonough Street
Hicks, Edward E........1168 Dean Street
Higgins, Thomas Vincent, 982 Bedford Avenue
Hill, Roy A..........Greenpoint Hospital
Hills, Rollin..............216 77th Street
Holden, Frederick C....198 Lincoln Place
Holzman, Arthur Chester, 314 Sumner Avenue
Hopper, Magnus Tate, 379 Washington Avenue
Horni, John........272 Jefferson Avenue
Horstman, August C., 1241 Hancock Street
Howard, Tasker..........28 Sidney Place
Howe, Alexander C., 40 South Oxford Street
Hoxsie, Edward H..........1 Hart Street
Hubbard, William S..1138 Bergen Street
Huffman, Otto V.....89 Joralemon Street
Hughes, Peter.......467 Bedford Avenue
Hull, Thomas H..........87 Lee Avenue
Hulse, Clarence H....83 Norman Avenue
Hulst, Francis A........1249 Dean Street
Humpstone, O. Paul, 327 Washington Avenue
Hunter, G. H. V..........334 73rd Street
Hyde, Clarence R........242 Henry Street
Hynes, Edward G....80 Ocean Boulevard

Hadley, William Wallace...Sea Cliff, L. I.
Hala, William Wendell,
660 Academy St., Long Island City
Hall, Ralph William, Stony Brook, L. I.
Hallinan, Joseph D.,
29 Lefferts Ave., Richmond Hill
Halsey, Hugh..........Southampton, L. I.
Halsey, James L.............Islip, L. I.
Hamill, John D.,
103 Third St., Long Island City
Harrison, Daniel A.....Whitestone, L. I.
Hatfield, F. P.,
55 Washington Ave., Rockaway Park
Hatton, Henry C.,
Wicks St., Morris Park, L. I.
Hawkes, Forbes...Port Washington, L. I.
Henderson, Alton Sanford,
Huntington, L. I.
Hendrickson, Samuel,
46 Bergen Ave., Jamaica, L. I.
Hewlett, Harold E.........Babylon, L. I.
Heyen, John P............Northport, L. I.
Heyman, Marcus B....Central Islip, L. I.
Hieber, George Matthew,
4 Washington Ave., Richmond Hill
Higgins, Aaron L..Rockville Centre, L. I.
Holcomb, Henrv V.........Bellmore, L. I.
Houghton, Harris A........Bayside, L. I.
Howard, James Gilbert,
17 Bass Ave., South Ozone Park
Howell, Hampton P.,
616 Madison Ave., New York City
Hulse, William A.........Bay Shore, L. I.
Humphreys, George H.,
46 Jeffrey Ave., Jamaica, L. I.
Hutchinson, J. Ensor.
Rockville Centre, L. I.
Hyland, Edward J.,
186 Shelton Ave., Jamaica, L. I.

I

Iler, George H......169 Hancock Street
Ingalls, James W. 874 Lafayette Avenue
Iszard, Walter R....141 St. Marks Avenue
Ives, Robert F........962 Ocean Avenue
Ivins, A. Lowry...........Sayville, L. I.

J

Jackman, Luther T......499 Eighth Street
Jacobson, Arthur C.....115 Johnson Street
Jameson, P. Chalmers,
139 Montague Street
Janson, Christian W.,
978 Bushwick Avenue
Jennings, Frank D..1083 Bushwick Avenue
Jennings, John Edward,
282 Jefferson Avenue
Jewett, Frederick A..282 Hancock Street
Jewett, William A..380 Vanderbilt Avenue
Joachim, Henry........421 Grand Avenue
Joerg, Christian Oswald,
12 Schermerhorn Street
Johnston, Charles L., 232 Hancock Street
Johnston, Evan Melrose.
61 Richmond Street
Johnston, Reuben T.,
615 Eastern Parkway
Joyce, Thomas U·quart, 700 Union Street
Judd, Albert M.........375 Grand Avenue

Jaques, Arthur D.........Lynbrook, L. I.
Jenner, William Edward,
664 Stoothoff Ave., Richmond Hill
Jessup, William H.,
Cornwall Ave., Hollis, L. I.

K

Kahn, Moses..........702a Halsey Street
Kahn, Oscar J.....511 Gravesend Avenue
Kalvin, Henri M..1715 East 13th Street
Kandt, Hartwig......2209 Clarendon Road
Kasper, Gerard....376 McDonough Street
Keenan, Albert J..251 New York Avenue
Keil, Peter A......164 Arlington Avenue
Kene, Joseph A.........64 Greene Avenue
Kenna, Richard J.........105 Reid Avenue
Kennedy, James Charles,
762 Willoughby Avenue
Kennedy, Patrick Joseph,
1766 West 8th Street
Kerr, LeGrand..........42 Gates Avenue
Kessler, George L...588 Bedford Avenue
Ketcham, George F....378 Adelphi Street
Kevin, J. Richard.......252 Gates Avenue
Keyes, Frank Perkins....83 Hanson Place
Keyes, James J............226 17th Street
King, Samuel T........351 Adelphi Street
Kinloch, Robert Ernest,
283 Franklin Avenue
Kinne, William.........48 Fourth Avenue
Klein, Abraham.....223 Clermont Avenue
Knause, B. Frank........1076 Bushwick Ave.
Resigned Dec. 31, 1917
Knight, Frank Henry..59 Seventh Avenue
Koehler, Charles G., Jr.,
859 Jefferson Avenue
Kohlmann, Henry John..546 Pacific Street
Konther, Adolph F., 184 Ridgewood Avenue
Krimsky, Joseph,
164 Pennsylvania Avenue

Kane, Julius Theodore,
9 Smith St., Jamaica, L. I.
Keays, Frederick L......Great Neck, L. I.
Kelly, Aquin S.,
294 Broadwav Far Rockaway, L. I.
Kerrigan, Joseph A.....Hempstead, L. I.
Kittell, Martin M.
101 Herriman Ave., Jamaica, L. I.
Krause, John George,
121 Gleane St., Elmhurst, L. I.

L

Lange, Hugo...........1182 Dean Street
Langer, Herbert L....102 Linden Avenue
Langworthy, Howard T.,
480 Franklin Avenue
Lasher, Frank Hermance,
82 Lafayette Avenue
Lawrence, Andrew Wilson,
599 Bedford Avenue
Lazarus, George F....2105 Caton Avenue
Leavitt, Emanuel Joseph,
728 Bushwick Avenue

Lee, John A..............23 Revere Place
Le Fevre, Caroline Hurd, 647 St. Marks Avenue
Leiter, Joseph G...598 McDonough Street
Lester, John C., 432 Madison Ave., New York City
Lewis, Silas Arthur..574 Bedford Avenue
Licht, Louis Frederick..69 Forest Avenue
Lincoln, Harry W....113 Hancock Street
Linder, Samuel......1780 St. Johns Place
Lynder, William....889 St. Marks Avenue
Lindridge, Edwin F..260 DeKalb Avenue
Lintz, William........1352 Carroll Street
Lippold, William Edward, 221 St. Nicholas Avenue
Little, George F......469 Clinton Avenue
Lloyd, Ralph Irving....450 Ninth Street
Lloyd, Thomas Mortimer, 125 Pierrepont Street
Lohman, William Henry, 616 Nostrand Avenue
Long, John Hathaway..1132 Bergen Street
Longmore, John A....158 Clinton Street
Louria, Leon............249 Hewes Street
Love, Cornelius R.......167 Clinton Street
Love, William Lathrop..857 Lincoln Place
Lowell, Walter William..419 Enfield Street
Lubrecht, Charles A..966 Bedford Avenue
Ludlum, Walter D...362 Marlborough Road
Ludwig, Robert Francis, 1242 Halsey Street
Luhrsen, Ernest F.....292 Greene Avenue
Lundbeck, Charles J....107 Bergen Street
Lutz, Stephen H......284 Hancock Street
Lynchm, Leo A.........906 Lincoln Place

Lanehart, Louis Nott....Hempstead, L. I.
Lawrence, Enoch P., 147 Amity St., Flushing, L. I.
Lehman, Max, 161 Halleck Ave., Glendale, L. I.
Lehmann, Theodore A., 227 Steinway Ave., Long Island City
Lewis, David R.........Whitestone, L. I.
Lindsay, Walter........Huntington, L. I.
Linnehan, George A., 171 Shelton Ave., Jamaica, L. I.
Loper, Arthur C........Greenport, L. I.
Louis, William I., 2122 Jamaica Ave., Brooklyn Hills
Luce, Charles A.........Amityville, L. I.
Ludlum, Charles H.......Hempstead, L. I.

M

McAveney, William J..134 Second Place
McCammon, Frederick J., 139 Decatur Street
McChesney, Herman F..138 Halsey Street
McClelland, Lefferts A., 78 McDonough Street
McEntee, Edward James, 196 Hancock Street
McGoldrick, Edward V..115 Russell Street
McGovern, Louis Vincent, 733 Quincy Street
McGuire, Constantine F., Central Neurological Hosp., Blackwells Island
McKenna, William Francis, 679 Tenth Street
McNamara, Sylvester James, 369 Union Street
McQuillin, John Parker, 414 58th Street
MacCarthy, Frederick Henry, 410 Clinton Street
MacCoy, Cecil......184 Joralemon Street
MacEvitt, James M.......514 Ninth Street
MacEvitt, John Cowell, 407 Clinton Street
MacNaughton, Donald Stuart, 50 Gates Avenue
Macumber, John L....291 DeKalb Avenue
Maddren, William Harvey, 500 Washington Avenue
Mahr, George J..........98 Wilson Street
Malament, Manasseh John, 1297 Carroll Street
Malone, Joseph W......8732 Bay Parkway
Manecke, Philip....1058 Bushwick Avenue
Mangan, Daniel Clarence..95 Park Avenue
Manley, Mark..........261 Monroe Street
Mannel, Anton F...923 Bushwick Avenue
Manning, Charles Edward, 480 Putnam Avenue
Matheson, A. Ross....37 Seventh Avenue
Matthews, Harvey Burleson, 638 St. Marks Avenue
Mausert, Gustav Adolf..67 Hanson Place
Mayne, Earl H.........139 Bay 17th Street
Meagher, John F. W..961 St. Johns Place
Meara, James A..101 South Oxford Street
Meeks, Frederick R..100 Hancock Street
Menasse, Joseph Phineas, 592 Henry Street
Merenna, Giovanni.......1465 59th Street
Merrill, George A....931 Flatbush Avenue
Merzbach, Joseph....204 Eighth Avenue
Meury, John B......785 Bushwick Avenue
Meyer, David W.......161 Clinton Street
Meyersburg, Harry, 722 Quincy St., Resigned Oct. 1, 1917
Miller, Lewis H..........26 Court Street
Mills, Henry M........192a Sixth Avenue
Minton, Henry B..165 Joralemon Street
Mock, Johann Wilhelm, 328 Central Avenue
Moitrier, William.....454 Putnam Avenue
Molloy, Augustine Joseph, 7508 14th Avenue
Monaghan, Frank J., 1069 Bushwick Avenue
Mooney, Patrick J........132 Kent Street
Moore, Joseph Leslie..175 Sixth Avenue
Moore, Samuel Edward, 1332 Myrtle Avenue
Moorhead, Robert L..185 Hancock Street
Morgenthaler, Herbert J. W., 911 Bedford Avenue
Morin, Jacob M.......1115 Bergen Street
Morris, Harold Arthur..350 Ocean Avenue
Morrison, Robert J......1173 Dean Street
Morton, Henry H., 32 Schermerhorn Street
Morton, Lawrence J., Ft. Hamilton P'kway & 88th St.
Mosher, Burr Burton, 184 Joralemon Street
Moxom, Philip W. T., 1807 Ditmas Street
Mueller, Carl.......743 Bushwick Avenue

Murray, Archibald, 36 Gramercy Park, New York City
Murray, Foster..........913 Union Street
Murray, Harrison F., Port Jervis, N. Y., Resigned Dec. 31, 1917
Murray, Patrick J.....478 Classon Avenue
Myerle, David...........793 Argyle Road

McCarthy, T. F...5 Ray St., Jamaica, L. I.
McCrea, Frederick L., Port Jefferson, L. I.
McGaffin, Charles Gibson, Kings Park, L. I.
McMahon, Denis Edward, 74 Kingsland Ave., Elmhurst, L. I.
MacClymont, DeWitt Clinton, Northport, L. I.
MacFarland, Ralph L., 63 Clinton Ave., Jamaica, L. I.
MacIvor, James H., Port Jefferson, L. I.
MacLean, Burdge P....Huntington, L. I.
Macklin, Walter Fullarton, 616 Madison Ave., New York City
Macy, William A., Kings Park, Resigned Oct. 1, 1917
Malcolm, William J.........Jericho, L. I.
Mann, John..........Old Westbury, L. I.
Many, Bradley F....Port Jefferson, L. I.
Markham, Convas L......Amityville, L. I.
Marshall, Joseph H........Southold, L. I.
Marshall, Samuel A., 387 First Ave., Long Island City
Martin, Arthur Chalmers, 131 Hempstead Ave., Lynbrook, L. I.
Mencken, H. P., 91 Newton Ave., Astoria, L. I.
Merritt, Frederick C........Sayville, L. I.
Meyen, George K..........Jamaica, L. I.
Meyers, Nathaniel.......Northport, L. I.
Miles, Clarence C........Greenport, L. I.
Moore, Edwin S........Bay Shore, L. I.
Moss, L. Howard, 505 Stoothoff Ave., Richmond Hill
Mulcahy, William L., 3 Cornaga Ave., Far Rockaway, L. I.
Murphy, Charles C......Amityville, L. I.
Murphy, Edward J., Holland, Rockaway Beach, L. I.

N

Napier, Charles Dwight, 100 Lafayette Avenue
Nash, Philip Ingram, Neptune Ave. & Cortland St.
Nichols, Carroll L....232a Putnam Street
Nichols, Harry Willard..323 Sterling Place
Nichols, Louis Lee..386 Stuyvesant Avenue
Noonan, Cornelius J., 554 Henry St., Resigned Dec. 31, 1917
North, Nelson L......150 Hancock Street
Northridge, Augustus Pearce, 1177 Bushwick Avenue
Northridge, Thomas H., 320 Cumberland Street
Northridge, William A., 402 Washington Avenue
Neail, Howard W., 7 Ray St., Jamaica, L. I.
Newman, Leander A., 190 Main St., Port Washington, L. I.
Niesley, Charles M.......Manhasset, L. I.
Nugent, John..........Southampton, L. I.
Nugent, John Henry...Southampton, L. I.
Nutt, Samuel D........Woodhaven, L. I.

O

O'Brien, William H. J., Bellevue Hospital, New York City
O'Connor, Charles G., 1497 President Street
Ogden, George S......641 East 28th Street
Ohly, John H.....22 Schermerhorn Street
Otis, F. Burton.......369 Hancock Street
Owens, George O....275 Kingston Avenue

Ostrander, George A., (Emeritus), 61 Greene Ave.
O'Hanlon, George, Bellevue Hospital, New York City
O'Leary, Cornelius........Patchogue, L. I.
Onuf, Brinslow.........Park Ridge, N. J.
Overton, Frank..........Patchogue, L. I.

P

Paffard, Frederic C....238 Clinton Street
Paine, Charles E.....694 St. Marks Avenue
Pallister, Stanley Wilson, 222 Jefferson Avenue
Palmer, George Hollis..489 Greene Avenue
Panoff, Charles E....1294 Prospect Place
Pardee, M. Clifford......168 Macon Street
Parrish, John W.....111 Montague Street
Parrish, Paul L........1036 Bergen Street
Pascual, William Vincent, 690 St. Marks Avenue
Peake, Chester A.......210 Rutland Road
Pearlstein, Maurice Barrett, 309 Hewes Street
Pearson, Lewis Walter..401 Union Street
Pendleton, Judson Philbrook, 91 Sixth Avenue
Peterman, Charles P..809a Greene Street
Peterson, Winfield A......454 43rd Street
Pettit, Henry S........106 Gates Avenue
Pettit, William Randolph, 1225 East 37th Street
Pfeiffer, William,..368 McDonough Street
Pierson, William H., 101 McDonough Street
Pilcher, James Taft.....145 Gates Avenue
Pilcher, Lewis Stephen..145 Gates Avenue
Place, E. Clifford........7 Hanson Place
Plath, John Henry..994 Bushwick Avenue
Plotkin, Henry..........486 Stone Avenue
Polak, John Osborn..287 Clinton Avenue
Pollack, Charles....1691 Eastern Parkway
Pomeroy, Ralph H...511 Nostrand Avenue
Pond, Erasmus Arlington, 1087 Dean Street
Pool, William Pohlman, 166 Clinton Street
Poole, John W., Voorhees Ave., near East 18th St.
Porter, E. Pender........1 Glenada Place
Potter, Alfred..........374 Sterling Place
Potter, Mary E...305 Washington Avenue
Price, William H......801 Prospect Place
Prout, Jonathan S.....Green Haven, N. Y.
Pullman, James..........155 Reid Avenue

Parker, Henry F........Lynbrook, L. I.
Parsons, Alfred H......Great Neck, L. I.
Payne, Albert E..........Riverhead, L .I.
Pease, Albert D.,
39 West 38th St., New York City
Pendill, Willoughby C..Huntington, L. I.
Pershing, Edward H.....Woodmere, L. I.
Peterson, Frederick C.....Smithtown, L. I.
Pflugg, Henry F.,
Van Cortlandt Ave., Evergreen L. I.
Phipps, Howard Morton..Hempstead, L. I.

Q

Quinn, William James..2436 Cornelia Street

R

Rabinowitz, Harris M..149 Watkins Street
Rae, Alexander..........117 Henry Street
Randall, Edwin Thompson,
139 Hancock Street
Ranken, John F............852 Park Place
Rankin, William H....151 Hancock Street
Raphael, Joseph,
100 Sixth Ave., Resigned Oct. 1, 1917
Rappold, Julius C....750 Flushing Avenue
Rathbun, Nathaniel P....67 Hanson Place
Ratnoff, Hyman L....447 Saratoga Avenue
Rauth, Emil........695 Lafayette Avenue
Raynor, Frank C....184 Joralemon Street
Read, Henry N.........228 Clinton Street
Read, John Sturdivant..174 Clinton Street
Reb, John H...............328 Jay Street
Reed, George E......737 Putnam Avenue
Reichers, George Henry,
1411 Bushwick Avenue
Reque, Peter A........440 Clinton Street
Reynolds, Harry Kelchner,
67 Gates Avenue
Reynolds, Willard G....1165 Dean Street
Rickard, Wilbur L.....271 Decatur Street
Riggs, Herman C....117 Montague Street
Rink, Walter S.....160 McDonough Street
Risch, Otto E. F.........495 Third Street
Ritch, Orlando S........78 Halsey Street
Robert, Daniel R....184 Joralemon Street
Roberts, Dudley D......84 Remsen Street
Robertson, Victor A....51 Eighth Avenue
Robinson, Nathaniel.....89 Halsey Street
Rodden, Hugh Aloysius.. 249 86th Street
Rogers, Hugh E.......102 Lewis Avenue
Rome, Russell Murray,
246 Clermont Avenue
Rooney, Alexander J....307 Sixth Avenue
Rose, Julius T..........128 Halsey Street
Rosecrans, William Brink,
1494 Greene Avenue
Ross, Walter H.....215 Jefferson Avenue
Roth, Aaron........1493 Eastern Parkway
Rowan, John P..........115 Park Avenue
Royce, Rubert S......200 Greene Avenue
Runge, Otto E............20 Foxall Street
Rushmore, Jacques C.,
477 Washington Avenue
Russell, Julien W..........6 Plaza Street
Rutz, Anthony A....105 St. Marks Avenue
Ryan, Lorne McDowell,
38 Livingston Street

Rau, Leonard S............Lawrence, L. I.
Rave, Adolph George.....Hicksville, L. I.
Rhame, William..........Wantagh, L. I.
Rice, Albert Carl...........Babylon, L. I.
Riley, Francis Gerald,
44 Hardenbrook Ave., Jamaica, L. I.
Rockwell, Alphonso D.,
370 Sanford Ave., Flushing, L. I.
Rodger, David R.,
614 Freedom Ave., Richmond Hill, L. I.
Roe, William H...........Patchogue, L. I.
Ross, C. A......Creed Ave., Queens, L. I.
Ross, William H........Brentwood, L. I.
Ross, William Holmes......Sayville, L. I.
Runcie, William H........Freeport, L. I.

S

Salmon, Armand J.......166 Sands Street
Samefeld, Joseph, 122 Pennsylvania Avenue
Sammis, George Frank..65 Decatur Street
Sanders, Harold Armstrong,
856 Park Place
Sauer, C. Theodore......284 Sixth Avenue
Scannell, John Matthew,
364 Jefferson Avenue
Schafer, Ernest L.,
801a Willoughby Avenue
Schaffner, Philip M........849 Park Place
Schauf, Adam........198 Vernon Avenue
Schelling, Henry L.,
264 Stuyvesant Avenue
Schenck, Herbert Dana..75 Halsey Street
Schirmer, William C.,
596 St. Marks Avenue
Schlein, Julius..........382 Union Street
Schlitz, Francis Augustus,
28 Jefferson Street
Schroeder, Frederick..26 St. Marks Avenue
Schroeder, William..339 President Street
Schwallie, Albert E.......217a 18th Street
Scofield, Charles Edward..880 Park Place
Scott, Peter........126 New York Avenue
Scrimgeour, Robert....752 Carroll Street
Search, Charles J....453 Franklin Avenue
Searle, Marcus Fowler....34 Plaza Street
Seidensticher, Richard F.,
96 Lafayette Avenue
Shann, Herman..........207 Hart Street
Shaw, Richard E.,
L. I. C. H. Pacific & Henry Streets
Shea, J. Denton, 28 Prospect Park West
Shearman, Robert W..400 Ocean Avenue
Sherman, David..........466 Ninth Street
Sherman, Wesley,
336 Ninth Street Resigned Dec. 31, 1917
Sherwell, Samuel..33 Schermerhorn Street
Sherwood, Walter Aikman,
289 Garfield Place
Shields, John A.....573 Lafayette Avenue
Sibbel, Armin Joseph,
882 Bushwick Avenue
Simmons, Warren S.,
216 St. James Place
Simmons, William, 23 Schermerhorn Street
Simrell, George Wallace,
151 Hawthorne Street
Skelton, Eugene W....294 Sixth Avenue
Slote, Samuel H......75 McKibbin Street

Smith, Alvarez H....382 Carleton Avenue
Smith, Archibald Delap..1209 Dean Street
Smith, Edeard J.....2016 Albemarle Road
Smith, Esmonde Bathgate, 1159 Dean Street
Smith, George H.....235 Hancock Street
Smith, Henry Mitchell, 184 Joralemon Street
Smith, Isaac Beckett....137 Noble Street
Smith, J. Wheeler..685 St. Marks Avenue
Smith, Sidney E.....78 Arlington Avenue
Smith, William Sidney, 370 Washington Avenue
Snell, Howard B.......299 Clinton Street
Somers, Elbert M.......33 Lefferts Place
Somers, James Alpheus..96 Greene Avenue
Southmayd, John Franklin, 380 Union Street
Spence, Thomas B......541 Third Street
Squibb, Edward Hamilton, 148 Columbia Heights
Sterling, John H........60 Greene Avenue
Stevenson, Robert........97 India Street
Stewart, James Alexander, 1030 Bedford Avenue
Stickle, Charles Waldo, 130 Montague Street
Stone, Charles Lucius....2 Glenada Place
Stone, William Livingston..444 74th Street
Stork, Louis..............337 77th Street
Straub, George C........35 Halsey Street
Street, Herman E....100 Brooklyn Avenue
Sturges, Purdy H......212 Garfield Place
Sullivan, John D....74 McDonough Street
Sullivan, Raymond P., 208 Jefferson Avenue
Sumner, Abraham J..82 Debevoise Street
Swan, Eugene La Forrest, 143 St. James Place

Sampsell, Ward, River Crest, Astoria, L. I.
Savage, William B........East Islip, L. I.
Schenck, Garret K. W., 86 Mott Avenue, Far Rockaway, L. I.
Schirck, Frederick F.........Mineola, L. I.
Schmuck, J. Carl..........Lawrence, L. I.
Schneble, John Peter, 406 Benedict Ave., Woodhaven, L. I.
Schweikart, Frederick J., 26 Vietor Place, Elmhurst, L. I.
Scovil, William Thomas, Church St., Richmond Hill, L. I.
Scudder, Frank D..Locust Valley, L. I.
Seaman, Benjamin White, Rockville Centre, L. I.
Sgier, Martin Joseph, Harald Ave. & Emerson Pl., Richmond Hill, L. I.
Sheridan, Joseph P., 1002 Church St., Richmond Hill, L. I.
Shipman, Elliott W., 416 Church St., Richmond Hill, L. I.
Shuttleworth, J. Evan, 4441 Brandon Ave., Richmond Hill
Skidmore, Melville....East Moriches, L. I.
Slocum, Millard M., 25 Mott Avenue, Far Rockaway, L. I.
Smith, Alfred H.........Springfield, L. I.
Smith, Edward Franklin, 8418 104th St., Richmond Hill, L. I.
Smith, George A......Central Islip, L. I.
Sockin, George Louis, 107 Prospect St., Jamaica, L. I.
Spiro, William W., 116 Third St., Long Island City
Squire, Frederick Duane....Setauket, L. I.
Steele, William J..........Baldwin, L. I.
Steffen, Walther Carl August, 557 4th Ave., College Point, L. I.
Steurer, Charles Augustus, Port Washington, L. I.
Stevens, Harry S.........Jamesport, L. I.
Stokes, John W............Southold, L. I.
Stone, William Metcalf, 117 Sanford Ave., Flushing, L. I.
Story, Charles B...........Bay Side, L. I.
Strain, William Peter, 294 Broadway, Far Rockaway, L. I.
Strong, S. Meredith, Beach St., Flushing, L. I.
Stumpf, Conrad O..........Queens, L. I.

T

Tag, Charles H......284 Jefferson Avenue
Takami, T. Campbell, 176 Washington Park
Talmadge, J. P.....L. I. College Hospital
Tanner, Ernest Ketchum, 1042 Bergen Street
Tarbox, Harry R....... 1178 Dean Street
Taylor, John M.......214 Eighth Avenue
Tenopyr, Joseph.....2915 Glenwood Road
Terry, Walter R........41 Linden Street
Thall, Charles Sewell, 1192 East 92nd Street
Thayer, Nathan P........1433 Avenue H
Thompson, James E...223 Greene Avenue
Thompson, William B., 1103 Lorimer Street
Thomson, Alec Nicol......835 Park Place
Thunig, Louis Albert..1069 Bergen Street
Tieste, Louis E..55 South Portland Avenue
Tilney, Frederick, 45 East 63rd St., New York City
Todd, Joseph F........402 Sterling Place
Tong, George William......502 4th Street
Townsend, Palmer..571 Jefferson Avenue
Truslow, Walter.........67 Hanson Place
Tucker, Frank L.........464 Ninth Street
Turkus, Edward Newton..465 15th Street

Taylor, Louis Harry, 175 Academy St., Long Island City
Terrell, Alan Greenleaf....Riverhead, L. I.
Terry, Arthur H........Patchogue, L. I.
Thomas, Joseph S, 259 Amity St., Flushing, L. I.
Tibbetts, James T., 168 Mineola Boulevard, Mineola, L. I.
Trask, James D..........Highlands, N. J.
Turrell, Guy H., Smithtown Branch, L. I.

U

Upham, Roy......300 McDonough Street

V

Van Cott, Joshua Marsden, 188 Henry Street
Van Sickle, Albert M......545 54th Street
Vaughan, Ernest M..284 Kingston Avenue
Vause, Frank C......381 Franklin Avenue
Virdone, Paolo........657 Lorimer Street
Vogt, Clarence B....498 Hancock Street
Vogt, Walter Eugene, 191 St. Nicholas Avenue
Voorhees, John A.,.......1655 Cropsey Ave. Resigned Dec. 31, 1917

Voorhees, William DeForrest, 775 Washington Avenue
Vosseler, Theodore Luther, 390a Monroe Street

Van Kleeck, Louis Ashley, Manhasset, L. I.
Van Winkle, LeRoy P....Amityville, L. I.
Vogt, Benedict, Jr., 1106 Washington Ave., Chester Park, L. I.
Voltz, Albert L., 514 Manor Ave., Woodhaven Junction, L. I.

W

Wachsman, Max..........429 43rd Street
Wade, Henry Albert..405 Greene Avenue
Wade, John E........908 Greene Avenue
Wadsworth, Emory M., 103 McDonough Street
Waggoner, William Clarkson, 167 Taylor Street
Walenta, William Fred, 396 Graham Avenue
Wallace, Wesley H......516 Ninth Street
Walmsley, Robert F..491 Putnam Avenue
Warbasse, James P., 384 Michigan Avenue
Ward, Joseph Francis..405 Tenth Street
Warner, Alton G..19 Schermerhorn Street
Warren, Luther Fiske....200 Hicks Street
Wasch, Milton B......960 St. Johns Place
Waterman, James Sears, 676 St. Marks Avenue
Watson, Cassius Hinds, 337 Washington Avenue
Watson, Oscar.........31 Bay 20th Street
Watt, Jaems.............200 Hicks Street
Waugh, Darwin W.....388 Clinton Street
Waugh, Henry H., 39 Schermerhorn Street
Webster, Henry Goodwin, 364 Washington Avenue
Weed, Ver Nooy W., 328 Stuyvesant Avenue
Weinstein, Samuel Z., 1880 Bergen Street
Weithas, Richard Charles, 814 Jefferson Avenue
Wellbery, Edward Montgomery, 218 Sixth Avenue
Welton, Thurston Scott..842 Union Street
Wesenberg, Paul Edward, 23 Linden Avenue
West, Frank E........172 Clinton Street
Westbrook, Richard W..1145 Dean Street
Weygandt, Frederick C., 645 Bedford Avenue
Whittbeck, Sherwood V., 678 St. Marks Avenue
White, Alfred Winfield, 360 Halsey Street
Whittaker, Neil McL......585 75th Street
Wiggins, Theodore C., 520 Nostrand Avenue
Wight, J. Sherman, 30 Schermerhorn Street
Williams, George Albert, 449 Hancock Street
Williams, Herbert F...416 Grand Avenue
Williams, John G........1136 Dean Street
Williams, Ralph Clarke....554 48th Street
Williamson, Charles E., 841 Willoughby Avenue
Willis, Clinton.......249 Jefferson Avenue
Willis, Harrison........569 Monroe Street
Wilson, Edward Earl, 592 Eastern Parkway
Wilson, Edwin Barnes, 80 Fenimore Street
Winfield, James M.......47 Halsey Street
Wolf, Adam B........968 Forest Avenue
Wolfort, B. E.....86 Prospect Park West
Wood, J. Scott..........172 Sixth Avenue
Wood, Robert Lowell..129 Hancock Street
Wood, Thomas B....155 Herkimer Street
Woolsey, William C..88 Lafayette Avenue
Wright, Justus Gaige....498 Ninth Street
Wuest, Charles....1075 Bushwick Avenue
Wunderlich, Frederick William, 184 Joralemon Street

Wadhams, Noah S., Westhampton Beach, L. I.
Waldo, Ralph.........Westhampton, L. I.
Walsh, Cornelius Edward, 93 Amity Street, Flushing, L. I.
Wandless, Henry W., Garden City, L. I.
Warner, Henry M.......Hempstead, L. I.
Washburn, LeMon D....Wantaugh, L. I.
Weigand, Frank J., 329 Chestnut Street, Richmond Hill
Wellbrock, Walter B...Lindenhurst, L. I.
West, Calvin B......Central Valley, N. Y.
Wicks, James M., 202 Shelton Ave., Jamaica, L. I.
Wiggers, August F. A., 176 Central Ave., Flushing, L. I.
Wilsey, Orville J........Amityville, L. I.
Wood, Frederick B., Gay St., & Hammond Pl., Elmhurst
Wood, Samuel A., 167 5th St., Elmhurst, L. I.
Wood, W. Franklin.......Norwich, Conn.
Wynkoop, Daniel W........Babylon, L. I.

Y

Yerdon, Charles F..1278 Herkimer Street
York, P. Joseph...........444 55th Street

Z

Zabriskie, John B....2103 Church Avenue
Zimmer, Wilson B..111 Woodruff Avenue
Zimmerman, Victor L., 271 Stuyvesant Avenue
Zabriskie, William H.....Glen Cove, L. I.

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Wiley, Harvey W......Washington, D. C.
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LONG ISLAND MEDICAL JOURNAL

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CLINICAL MEETING OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND.

Brooklyn Hospital, January 27, 1917.

REMARKS ON METHODS OF UROLOGICAL DIAGNOSIS EMPLOYED AT THE BROOKLYN HOSPITAL.*

N. P. Rathbun, M.D.

Brooklyn-New York.

THE importance of a careful history cannot be overestimated. The chart (Fig. 1) is more or less self explanatory. The symptoms are tabulated approximately in the order of frequency of occurrence in the cases seen in our clinic. This chart is hung in our history room and serves as a reminder to the younger men of what they should inquire when taking histories. It furthermore serves to make our histories uniform. Having obtained a history we proceed with our examination, noting first the general appearance of our patient, the presence of any abnormalities of the external genitals, and microscopical examination of any urethral discharge which may be present. The urine is then passed into two glasses and examined along the lines indicated by the chart in Fig. II. The prostate and vesicals are next palpated per rectum, noting size, consistency, and the presence of any variations from normal. In the chronic venereal cases these organs are massaged, their contents expressed through the urethra, and microscopical examination is made.

At the next visit the urethra is examined with flexible bougies á boule and the presence of infiltrations and erosions are noted.

The next step is an endoscopic examination of the urethra, anterior and posterior. Fig. III shows the appearance of a normal anterior urethra. Fig. IV shows an area of hard infiltration in the anterior urethra. Many other pathological conditions, such as diseased follicles, abrasions, etc., are noted from time to time. The posterior urethra is examined at another sitting and with another instrument. Fig. V shows the appearance of a normal posterior urethra as seen through a water endoscope. Fig. VI shows a posterior urethra in which the verumontanum is covered with granu-

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* Delivered before the Associated Physicians of Long Island, January 27th, 1917.

HISTORY

- **Discharge**
  - Character
    - *white*
    - *yellow*
    - *bloody*
  - Periodicity
    - *constant*
    - *morning*
    - *on pressure*
    - *at stool*
- **Pain**
  - Location
    - *back*
      - *loin*
      - *sacrum*
    - *groin*
    - *bladder*
    - *testicle*
    - *perineum*
    - *meatus*
  - Character
    - *constant or paroxysmal*
    - *dull or shooting*
  - Relation to urination
    - *no relation*
    - *accompanying*
    - *increased by*
    - *relieved by*
- **Frequency**
  - *day*
  - *night*
  - *both*
  - *incontinence*
- **Character of Stream**
  - *difficult to start*
  - *small*
  - *twisted*
  - *dribbling*
  - *interrupted*
- **Haematuria**
  - Amount
    - *intimately mixed with urine*
    - *clots*
  - Occurrence
    - *at beginning of urination*
    - *at end of urination*
  - Accompanying
    - *pain*
    - *gravel*
    - *tissue*
- **General Symptoms**
  - Sexual disturbances
    - *impotence*
    - *premature ejaculation*
    - *nocturnal emissions*
    - *involuntary emissions*
    - *priapism*
  - Neuroses
  - Vasomotor disturbances
  - Loss of weight
  - Fever

Figure I—History Chart.

URINE

- **Two Glass Test**
  - Clear or Turbid
  - Shreds
    - *long, heavy*
    - *short*
    - *comma*
    - *long filaments*

The following applies more particularly to the second glass in those cases where both glasses ***are*** *alike.*

- **Turbidity**
  - Urates --*clear on heating*
  - Phosphates--*clear on addition of acid*
  - Carbonates--*effervese on addition of acid*
  - Sediment
    - *coarse (ropy mucus)*
    - *finely granular-diffuse*
  - Supernatant fluid *(on standing*
    - *turbid*
    - *clear*
  - Macroscopic blood
    - *intimately mixed*
    - *not intimately mixed*
  - Haemoglobinuria
  - Macroscopic gravel
- **Reaction**
  - Acid or alkaline
- **Microscope**
  - *Pus*
  - *Blood*
  - *Epithelia*
  - *Bacteria-TBC-Stained slides*
  - *Crystals*
- **Routine Chemical**
- **Culture**
- **Inoculation**

Figure II—Urine Chart.

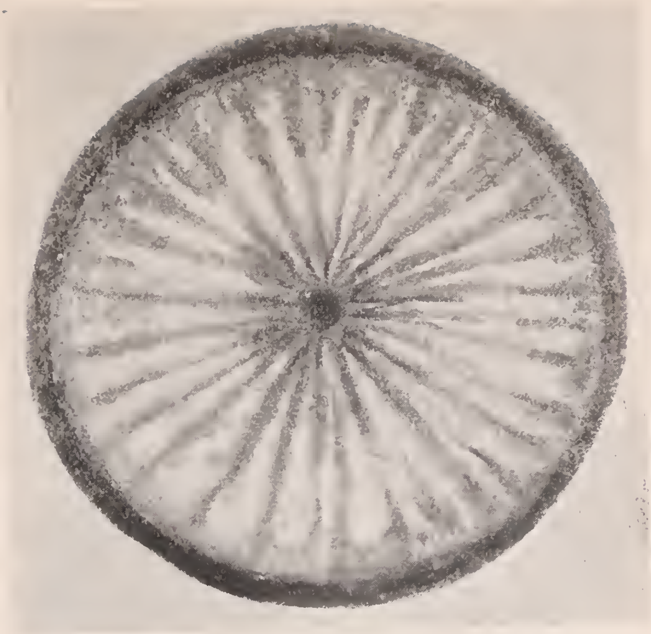


Figure III—Normal Anterior Urethra.

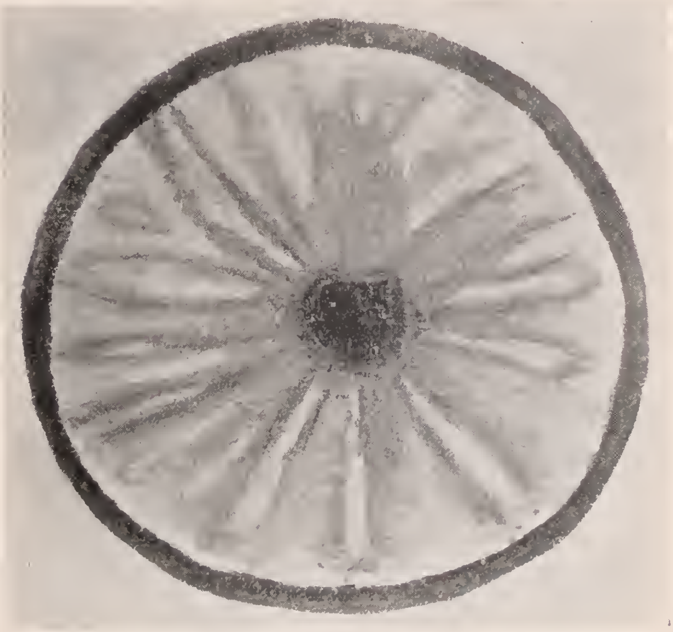


Figure IV—Infiltration in Anterior Urethra.

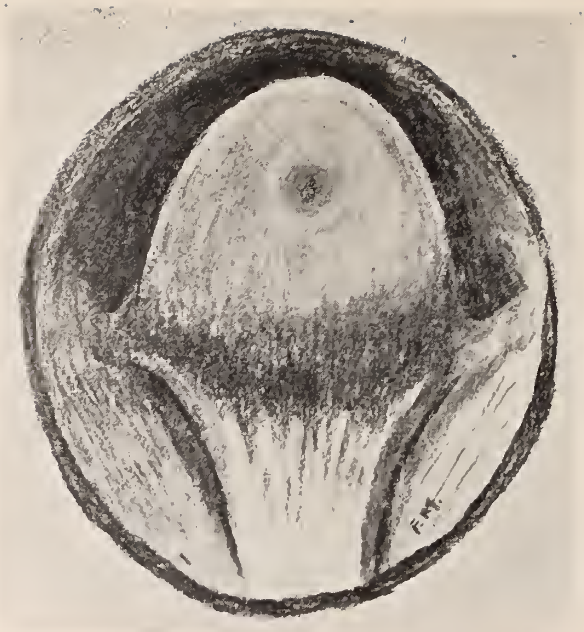


Figure V—Normal Posterior Urethra.

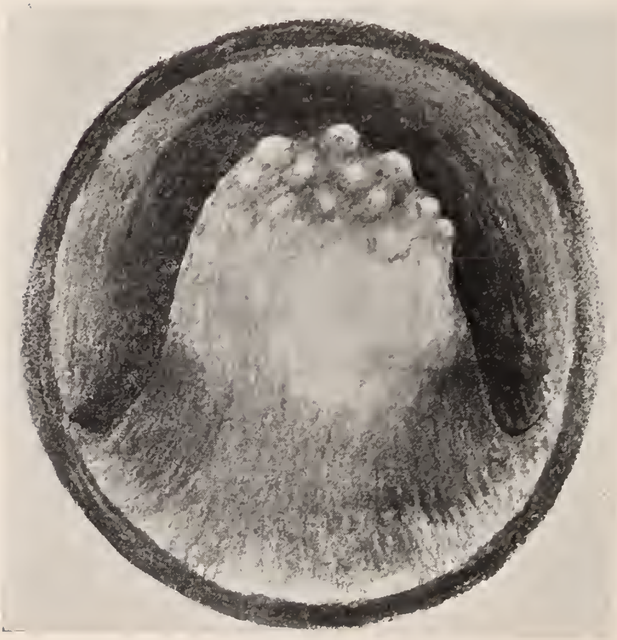


Figure VI—Granulations on Colliculus.

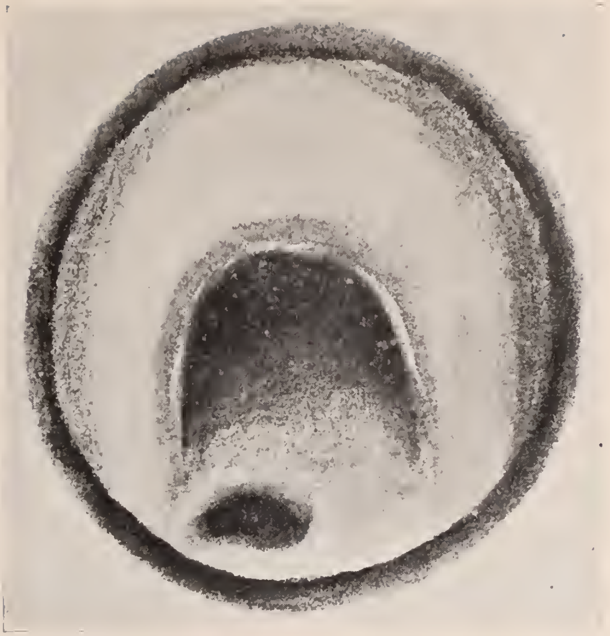


Figure VII—Congenital Diverticula of the Posterior Urethra.

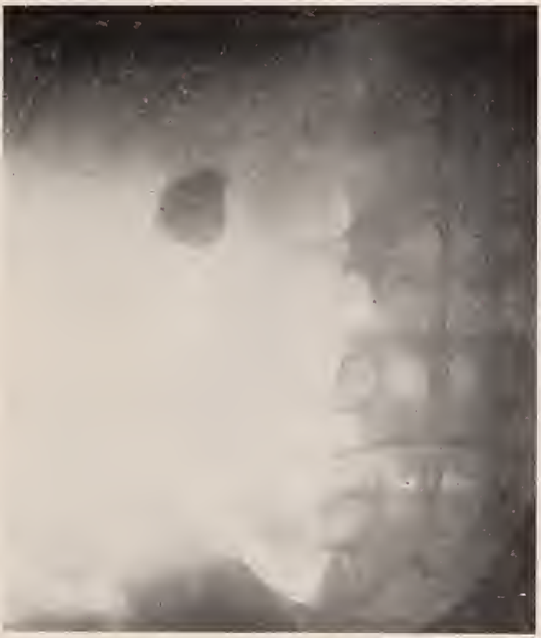


Figure VIII—Calculus in Kidney Pelvis.

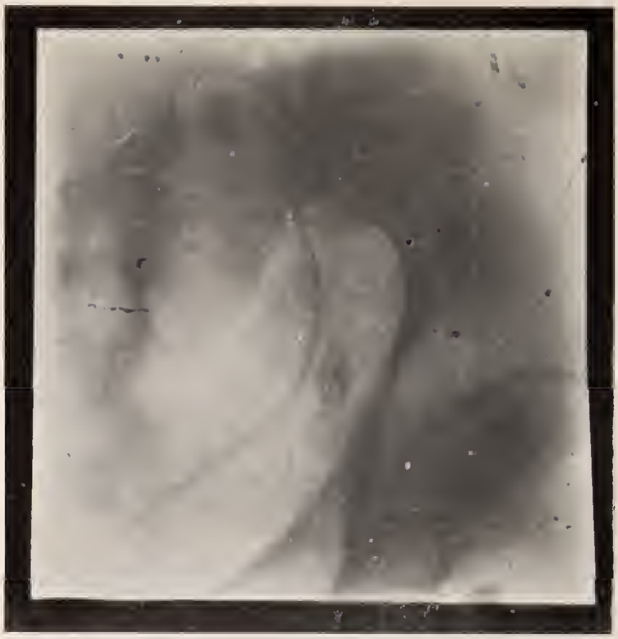


Figure IX. Shadow of calcified gland simulating ureteral calculus

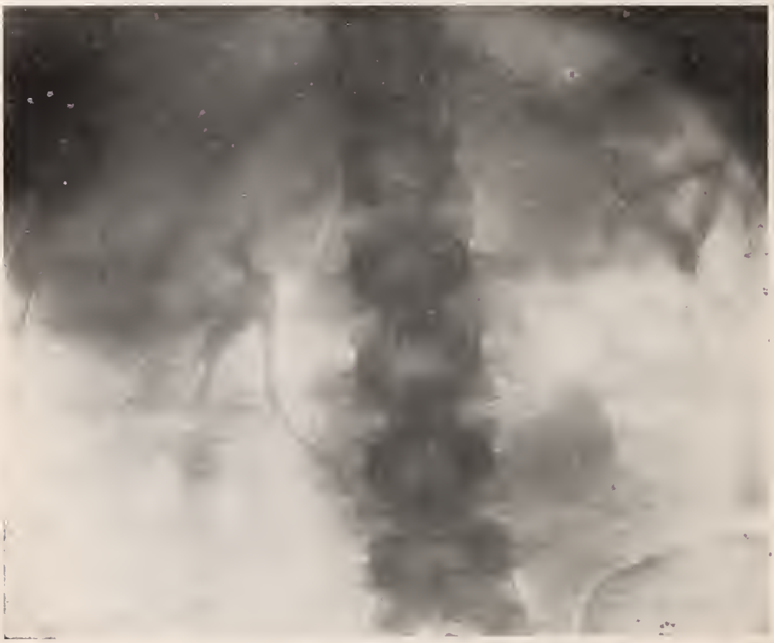


FIGURE X—Thorium pyelogram of normal kidney pelvis

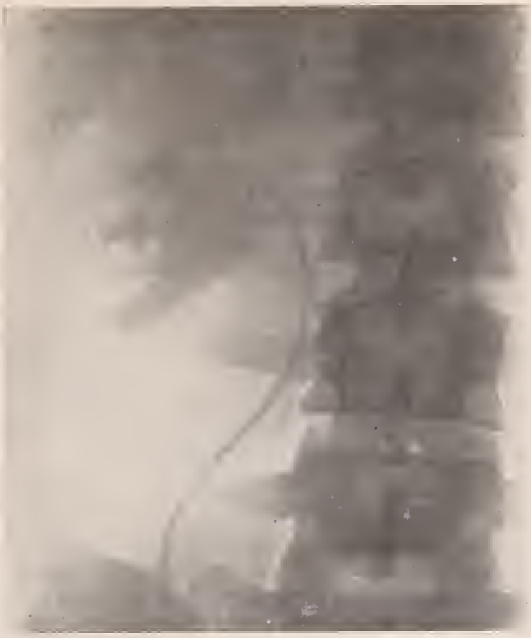


FIGURE XI—Pyelogram of kidney pelvis with tendency toward hydronephrosis.

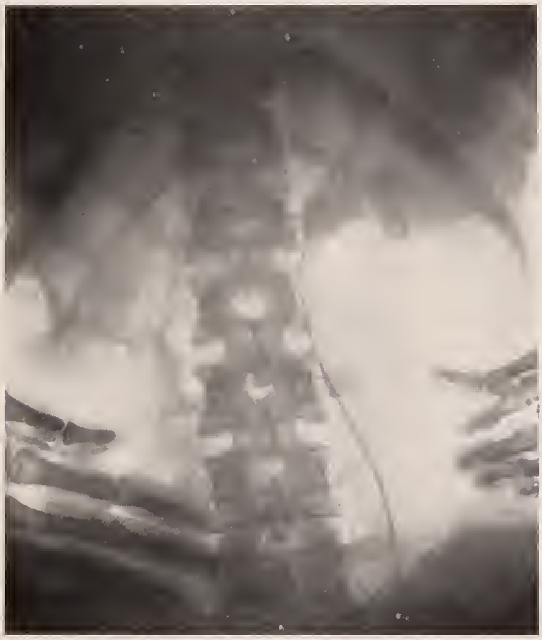


FIGURE XII—Pyelogram of tubercular kidney with obliteration of some of calyces.

lations causing a persisting urethral discharge and various reflex nervous symptoms. Fig. VII shows two congenital diverticula of the posterior urethra.

This completes the examination of the urethra. Where indicated, we proceed to an examination of the bladder. A cystoscope is introduced, noting at the time the presence and amount of residual urine if any. We then note the presence of calculi, tumors, trabeculae, etc., the appearance of the mucous membrane, the trigone, ureter orifices, and bladder neck, and the presence or absence of any prostatic abnormality. Catheters may then be passed into each ureter, noting whether or not they pass readily to the kidney pelvis. The cystoscope is then removed from the bladder, leaving the catheters in the ureters. The urine from each kidney is collected in sterile bottles and examined above. Phenolsulphone-phthalein is then injected intramuscularly and its time of appearance noted on each side, this making a fairly accurate test of the functional capacity of each kidney.

Our next diagnostic aid is the x-ray, particularly in the diagnosis of calculus. Fig. VIII shows a large calculus in the kidney pelvis. We find that there is about a 15% margin of error on each side in the x-ray diagnosis of urinary lithiasis. That is to say, calculi may occur in about 15% of the cases that give a negative radiograph and conversely, about 15% of cases that show apparent calculi in the urinary tract are not calculi at all. So that we have to check up these diagnoses by other methods such as the wax-tipped catheter and other cystoscopic manipulations in conjunction with the x-ray. The use of the opaque ureteral catheter and pyelography are the most important of these. Fig. IX shows a shadow which had been diagnosed as ureteral calculus in which a radiograph made with an opaque catheter in situ showed the shadow to be outside the ureter. Fig. X shows a thorium pyelogram of a normal kidney pelvis. Fig. XI shows a pyelogram of a border line case with slight tendency to hydronephrosis. Fig. XII shows a pyelogram of a tubercular kidney. In this case the obliteration of some of the calyces is to be noted.

The above is a very brief outline of some of the diagnostic methods in routine use at our clinic.

Note: Figures III, IV, V, VI and VII are from sketches made by Doctor W. Frank McKenna from cases seen in our clinic.

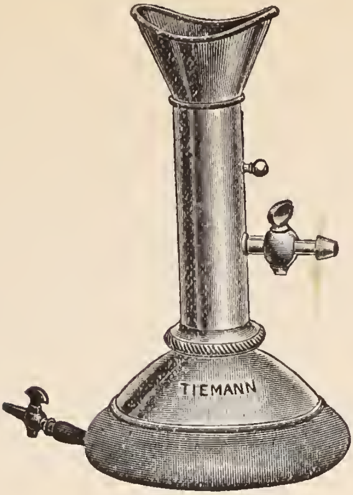
TREATMENT OF ASPHYXIA NEONATORUM.

Herbert C. Allen, M.D.

Brooklyn-New York.

THIS paper is a plea for better and more scientific treatment of asphyxia of the new born. In the United States alone one hundred thousand infants die annually from this at birth, and out of every thousand that live five hundred more infants have been lost to this cause.

The text-books seem to vie with one another to publish the longer list of treatments but rarely are any new methods mentioned



nor has there been any original work done along these lines. The cause for this we believe is that the vast majority of men doing obstetrics do so under protest or to hold their families and to gain new patients so that special obstetrics is being done in the minority these days, and the treatment of asphxia neonatorum is usually incompetent or neglected.

The larger number of cases need no treatment but to be prepared is at least a step to drive away the scare, and better results will be the end gained. The day that has the largest death toll is the day of birth and to change this something better than the old time worn method must be used.

Prophylaxis is the watch word of the day and prevention is better than cure, and to put this into action simply means to imitate nature and provide the elements necessary for nature to sustain life and use these in the cases that do not respond to the usual external methods of reflex stimulus.

The first requisite is to preserve the body heat, for to try to resuscitate a cold, half-dead child is almost always a forlorn hope. A soft rubber catheter passed into the throat and the mucus and liquor anii removed to clear the smaller bronchi is necessary. Next some means of insufflating the lungs with warm damp air, and oxygen is the safest method of procedure. Some prefer the lung motor, others the pulmotor, and the mouth to mouth method may be used. We feel that by the use of our resuscitation horn the best results have been gained as by this simple instrument the human touch is not lost and with this means the lungs are never over distended and oxygen is admixed with warm damp human breath. Dilatation of the stomach is prevented by keeping the fingers of the left hand along the free border of the ribs over the stomach. Your own warm damp breath admixed with pure oxygen is forced into the infant's lungs while the babe rests on a hot water bottle over which is a blanket, and then the babe is covered with another blanket. The body heat is thus preserved, the requisites for life are given and the human touch is never lost as it is in the more mechanical lung motors.

The methods of Sylvester simply scratch the surface, and Schultze waves the child in the air, losing all body heat; Laborde's method rattles the tongue and Byrd's method has some good points and is of use, but is more often abused in the hands of internes and the unskilled, as rupture of the liver may result, or the child be squeezed to death by the force usually employed.

All resuscitation methods should be practiced not more than seven to ten times per minute at first and never cease so long as the heart is seen or heard to be in action.

The air cushion about the mask is inflated and the mask placed over the face of the child and warm, moist, human breath is breathed into the lungs of the infant. By placing the fingers of the left hand at the free border of the ribs of the infant, inflation of the infant's stomach may be avoided. In the hollow shaft of the horn there are two items of interest, one a damper valve which can shut off the shaft entirely and another stop cock below the damper valve to which may be fitted the rubber tube from an oxygen wash bottle for administering oxygen when desired.

The warm moist human breath containing a small amount of CO_2 can be administered by this method. Those realizing the infant's needs at such a period are able to more delicately and efficiently administer admixed oxygen as may be desired and with all the human touch so necessary but usually lost in other procedures.

Never will lungs be over inflated, and never will the lungs fail to be filled because with the hand on the infant's chest, guiding lung inflation, the same hand prevents stomach distention and in our experience this simple instrument has saved lives that would not have been possible with the more mechanical cold air motors.

Anesthesia may be administered through this horn and by virtue of the damper valve with or without the admixture of oxygen, by simply placing gauze in the shaft to act as a sponge to absorb the anesthetic desired. So with this simple instrument in the obstetrical bag a resuscitation device is at hand as well as an anaesthetic mask. The shaft of the horn unscrews and allows less space in packing.

A CASE OF ACUTE PANCREATITIS WITH LATER DEVELOPMENT OF PANCREATIC CYST.*

William Linder, M.D., F.A.C.S.

Brooklyn-New York.

S. R., Female, 23 years old. Jewish Hospital admission number 35,454. The patient gave birth to a baby four and a half months before admission. On the ninth day postpartum she was taken with an attack of abdominal pain, which was followed by another attack two months afterwards. These attacks, simulating gallstone colic, were of moderate severity. Since the birth of the baby, there has been a continuous sense of discomfort and pressure in the epigastrium, especially after meals. The present illness began six days before admission with excruciating knife-like epigastric pain, which radiated to the back and up between the shoulder blades. She became weak and pale, felt feverish and chilly, and was covered with a cold sweat. The pain was lessened by a hypodermic injection of morphine, but returned three hours later, when she received another injection. Since then the pain has become constant, though less severe. She vomited several times at the onset. She was admitted January 5th, 1916, to the Jewish Hospital of Brooklyn.

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* Delivered before the Associated Physicians of Long Island, Jan. 27, 1917.

Examination revealed patient in severe pain and very restless. The right hypochondrium was tender and rigid. A palpable tumor was felt extending from the top of the right ninth costal cartilage to the umbilicus. This mass was tender, elongated, and gave the impression of being a distended gall bladder. No jaundice was present. The temperature was 102° F, respiration 28, and pulse 128. The urine revealed a trace of albumin. The white blood cell count was 9,800; the polynuclears numbered 80%.

Because of her improving general condition, she was held over for operation until three days later. The operative findings were a large amount of serosanguineous fluid in the peritoneal cavity; the palpable mass was identified as omentum adhered to the transverse colon, both being pushed forward by an enlarged pancreas; the parietal peritoneum and entire omentum were thickened and rough in many places, having the characteristic gritty feel. The gastrocolic omentum was torn through and some "beef-broth" fluid escaped. The enlarged pancreas was punctured and bloody fluid evacuated. The gall bladder was found normal in size and appearance, and contained no stones detectable to palpation. Rubber tube drainage to the pancreas was established, which was removed in a few days. The patient's temperature gradually reached normal by the third week and she was discharged in good general condition with a granulating wound.

The patient was readmitted to the hospital two and a half months later. She stated that following her discharge after operation, she experienced some fulness and discomfort in the epigastrium. This was fairly constant, but worse lying on her back. The pain radiated to both hypochondriac regions and back preventing sleep. Some relief was obtained after eructations or enemata. There was no jaundice, no nausea, no chills, no fever.

Examination now revealed a healed scar at the site of the previous sinus, which had closed over within four weeks after discharge. Pulse 94, temperature 100° F, respiration 24. The epigastrium appeared full. A smooth, tense, oval-shaped mass was seen and felt extending from the xyphoid to about three inches above the umbilicus, and two and one-half inches to either side of the midline. This mass was somewhat tender, immobile, and deep in the abdomen. Percussion note over it was dull. Inflation of the stomach showed the stomach to overlie the mass to the left and below. Inflation of the colon revealed the transverse colon just below the lower level of the mass. Abdominal rigidity and tenderness were absent.

A diagnosis of pancreatic pseudo-cyst was made and operation performed the next day. Right rectus incision down to the peritoneum. The cyst was palpated, and 40 c.c. of its contents aspirated. No incision into cyst, but a small rubber tube was placed in the wound down to the aspiration point in the sac. Iodoform gauze was packed in the wound and around the tube. The abdominal incision was not closed. The idea was to cause adhesions about the tube, so that an opening and drainage of the cyst could be later accomplished without any spilling into the peritoneal cavity. This treatment was feasable as this was not truly a cyst of the pancreas, but a pseudo-cyst the walls of which were formed by the adjacent organs. As this cyst was not lined by mucous membrane, there was little danger of its refilling, once it was allowed to gradually collapse.

Four days later the cyst was opened with a dressing forceps and a drainage tube inserted. This was done without any anesthetic, while the patient was in her bed in the wards. The fluid on examination was dark green in color, sterile of bacteriological growth on culture media, alkaline, turbid, of a specific gravity of 1025; with blood pigments and amylopsin ferment present. Drainage was kept up nine days, and the patient discharged cured four days later.

BICHLORIDE OF MERCURY POISONING.*

Frank Bethel Cross, M.D.

Brooklyn-New York.

A preliminary report on eight cases treated by the Lambert-Patterson method at the Methodist Hospital by Frank B. Cross, M.D. and Henry G. Webster, M.D.

MY colleague, Dr. Webster, and I report 8 cases of Bichloride poisoning, these comprising all the cases admitted between Jan. 7, 1915 and May 6, 1917. They fall equally between the two services, with four in the care of each of us.

Curiously all are females; 5 were actuated by suicidal motive.

They took respectively:

22½ grains
7½ grains with ½ oz. Chloroform Lin. and ½ oz. Cedar oil
15 “
15 “
15 “ with 3 oz. Lysol and then turned the gas on
15 “
10 “
10 “

The case preceding these 8 was admitted April 7, 1914 12 hrs. after taking 15 grains. There was no early treatment previous to lavage at the time of admission to the hosp. The treatment then instituted was

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* Presented before the Associated Physicians of Long Island, Jan. 27, 1917.

Lavage q d
Hot pack q d: q 4 h after 3d day
Cupping of kidneys
Mag Sulfat ʒ iii q 6 h
Water 4 oz. q 2 h
Pot. citrat gr xx q 2 h
Allowed fluid and far. diet.

There was no response: the urine output varied from 2 to 5 oz. per day.

Death occurred on the 11th day.

Through a mutual friend the treatment, originated at St. Luke's, was learned of in Jan., 1915 and put immediately into service—and with splendid results.

Drs. Lambert and Patterson published their method in the Archiv. of Int. Med. for Nov., 1915 (submitting it for pub. in June, '15).

A paragraph from their article reads:

"The therapeutics of Mercuric Chlorid poisoning up to the present have been quite unsatisfactory. The patients have regularly developed anuria on or about the fourth day after taking the poison and progress to subsequent death, from lesions of the liver and colon, with or without the re-establishment of the urinary secretion."

The immediate treatment does not concern us in this brief account. It consists of lavage, the free use of albuminous substances like raw eggs and milk; and the *eliminative treatment.*

This consists of *five distinct features:*

(1) Every hour in alteration, the patient receives by mouth either 8 oz. of milk or the following:

Potas. Bitart	½ dr.
Sugar	½ dr.
Lactose	2 dr.
Lemon juice	½ oz.
Boiled water	8 oz.

(2) Continuous rectal drip of solution of Pot Acetat dr, water Oi
(3) Lavage of stomach q 12 h
(4) Tap water irrigation of colon bid.
(5) Hot pack daily.

The lavaged fluid is examined daily for mercury by the method of Karl Vogel: an extremely delicate test based upon the amalgamization of fine dental gold foil.

The important question is, how long should active measures be continued? The answer is, certainly until the lavage washings are free of mercury.

Somewhere between the 5 and 10 days the urine total drops: fluids must be pushed *beyond this period.*

There are only two warnings that I must give you:

The treatment is hard on both the patient and the nurses, but if a good result is to be obtained, the treatment must be followed through.

Second: be sure the nurses waken the patient for the *hourly feedings:* the tendency is to relax vigilance and feed only if the patient is awake.

The chart is of the sixth case: 15 grains of Bichlorid were taken with malice aforethought. Lavaged within ½ hour, the patient was entered 1 hour after ingestion of the poison. Treatment was promptly begun and the recovery prompt.

The straight line represents the sp. gr. of the urine, the curved line the urine output in oz.

There are two modifications with which I am familiar. The first is that used in the Stengel service at the University Hospital in Philadelphia, sodium salts being substituted for potassium salts. The objection is raised that in such large quantities potassium salts might produce potassium poisoning with depression of the heart, in the presence of such impairment of kidney function.

Wilson G. Smillie of Boston, dealing with experimental uranium nephritis, has pointed out the dangers of potassium intolerance (Archiv. Int. Med. Aug., 1915). The same condition might well develop in such a severe nephritis as mercury occasions. In our experience, no such observation has been made.

In the June 2 issue of J. of A. M. A., H. B. Weiss of Cincinnati, Civil Hosp., reports 28 cases with 1 death under the second method. It is essentially as follows:

No continued lavage or colonic irrigation.

Initial lavage, 3 oz., Mag. Salt introduced into stomach.

S S Enema.

If no treatment for 3 hrs. 1000-1500 mil. of Fischer's sol. (Sod. Carb. 10, Sod. Chlor. 15, Water 1000).

Imperial drink 6-8 glasses q d.

Urine kept alk. to sat. sol. Methyl red.

It seems necessary to begin this treatment at least 24 hrs. after the poison is taken.

The case reports follow:

Case I—(Old Plan of Treatment.)

Rosie C. Admitted April 7, 1914. Age 17 yrs. Female. Single. Seamstress. Service of Dr. Cross.

Amount taken—Two 7½ gr. tablets.

Vomiting began three hours after taking poison.

First Lavage—Twelve hours after taking poison on admission to the hospital.

Early Treatment—Received no early treatment previous to the lavage twelve hours later at the hospital.

Condition on admission—Malaise but no acute pain. Complains slightly of sore throat and some dysphagia. Physical examination negative except for slight tenderness in both kidney regions.

General Treatment—Mag. Sulph. dr. iii q 6 h.
Water oz. iv q 2 h.
Potass. Citrate gr. xx q 2 h.
Lavage q d.
Hot pack q d for 2 days q 4 h for 3 days then q 6 h. Kidney regions cupped on 6th day q 4 h for 5 das.

$$\text{Hypodermoclysis}\left\{\begin{array}{l}\text{N.S.S.}\\ \text{Soda. Bicarb.}\end{array}\right\}\begin{array}{l}\text{oz. viii b.i.d}\\ \text{from 9th day.}\end{array}$$

Allowed fluid and farinaceous diet from the start.

Fluids (*ozs.*)

Day	Intake	urine
(3)	?	0 ozs. recorded
(5)	?	3 ozs. "
(6)	?	3 ozs. "
(7)	?	5 ozs. "

(8)	?	5 ozs.	"
(9)	?	2 ozs.	"
(10)	?	3 ozs.	"
(11)	?	26 ozs.	"

Temperature—Never above normal.

Urinary findings—Examination of seventh day showed a heavy cloud of albumin and a few R. B. C., W. B. C. and epithelial cells. No casts.

Blood findings—7th day—

4.540,000 R. B. C.
75% Haem.
7,640 N. B. C.
64 Polys
5 Large L.
30 Small L.
1 Trans.

'Phthalein test...................

Result—Death on 11th da.

Case II—(First Lambert-Patterson case.)

Carrie E.—Admitted January 7, 1915. Age 28 yrs. Female. Married. Housewife. Service of Dr. Webster.

Amount taken—Three 7½ gr. tablets mistaking them for headache tablets.

Vomiting began ten minutes after taking poison.

First lavage by ambulance surgeon 25 minutes after taking tablets.

Early treatment—Took a glass of milk 15 minutes after taking the poison and 10 minutes later was lavaged by the ambulance surgeon.

Condition on admission—Had slight abdominal pain and sore throat, also a severe headache. Did not appear acutely ill. Throat congested. Heart and lungs negative.

General treatment—High Saline Colonic q 12 h for 10 days beginning on 2nd then q d. Lavage c 2 gal. saline b. i. d. for 10 days then q d. Murphy Drip 75% Potass. Acetate Sol. for 10 days.

℞

Potass. Bitart. dr. 1
juice 2 lemons
sugar q. s.
Aqua ad oz. xxxii

Sig. ozs. vi q 2 h alt. c milk oz. viii
Milk toast on 7th day
Cereals, bread and butter on 10th day
Full diet on 12th day
Chair on 18th day

Fluids (*ozs.*)	Day	Intake	Urine
	(2)	75	34 +
	(3)	106	25 +
	(4)	120	74 +
	(5)	138	88 +
	(6)	198	76 +
	(7)	152	18 +
	(8)	100	116 +
	(9)	186	88 +
	(10)	124	62 +

(11)	152	130 +
(12)	?	32 +
(13)	32	52 +

Temperature—From 98-101 until the 11th day, then flat.

Urinary findings— Day	Sp. Gr.	Alb.	Microscop.
(2)	1011	Faint trace	Neg.
(4)	1011	Trace	pus
(6)	1007	Faint trace	Many leuc. & ep.
(10)	1010	Trace	pus
(12)	1013	0	few leuc.
(15)	1030	0	leuc. & ep.

Blood findings...............

'Phthalein test..................

Result—Recovery 19th da.

Case III.

Estelle P.—Admitted Mar. 7, 1915. Age 35 yrs. Female. Widow. No occupation. Service of Dr. Webster.

Amount taken—One 7½ gr. tablet Cedar oil { Chloroform liniment aa oz. ss.

Vomiting began ?

First lavage—Ten minutes later by ambulance surgeon.

Early treatment—Lavaged by ambulance surgeon ten minutes later, who also introduced milk ozs. xvi and four eggs through the tube. This he shortly washed out and then introduced milk ozs. viii. She was lavaged a third time 50 minutes later on admission.

Condition on admission—Well developed woman not acutely ill. Throat slightly congested. Heart and lungs O. K. Slight edema both legs.

General treatment—Lavage b. i. d. c Normal Salt Solution for 6 days then q d for 2 days. High saline colonic b. i. d. for 9 days. Murphy drip 75% Potass. Acetate Sol. for 6 days. Lavage q d beginning on the 6th day for 2 days.

℞

Potass. Bitart. dr. i.
Juice 2 lemons..
Sugar ozs. i.
Water ad oz. xxxii.

Sig :—oz. vi q 2 h alt. c milk ozs. viii.

Farinaceous diet allowed on admission.

Full diet allowed on 9th day.

About on 9th day.

Fluids (*ozs.*) Day	Intake	Urine
(1)	?	22
(2)	80	34 +
(3)	54	85 +
(4)	84	35 +
(5)	94	56 +
(6)	75	61 +
(7)	80	55 +
(8)	58	42 +

Temperature—Never above normal.

Urinary findings—Day Sp. Gr. Alb. Microscop.

(2)	1020	0	Neg.
(5)	1010	0	Few leuc.
(11)	1030	0	" "

Blood findings...............

'Phthalein test...............

Result—Recovery 12th day.

Case IV.

Tina M.—Admitted October 7, 1915. Age 32 yrs. Female. Single. Seamstress. Service of Dr. Webster.

Amount taken—Two 7½ gr. tablets.

Vomiting—began very soon after taking, time not stated. Vomiting lasted 24 hrs.

First lavage—1½ hrs. after taking tablets, on admission to hospital.

Early treatment—No treatment previous to admission, when she was lavaged at once c 3 gal. soda bicarb. sol. and had 3 eggs introduced through the tube.

Condition on admission—No severe pain. Had some epigastric irritation and vomiting. General condition good. Heart and lungs O. K.

General treatment—

Hot pack b. i. d.	for	Hot pack
Lavage b. i. d.	5 then	Lavage qd.
High Saline colonic qd.	days	

Fluids forced throughout. Murphy drip 75% Potass. Acet. Sol. began on 3rd day for 4 days, then p. r. ozs. iv q 4 h for 2 days.

℞

Potass. Bitart. dr. i.
Juice 2 lemons.
Sugar dr. ii.
Water ad qt. i.

Sig. 2 qts. q 24 h.

Fluids (ozs.) Day	Intake	Urine
(3)	127	174
(4)	105	152
(5)	140	92
(6)	148	100 +
(7)	161	160 +
(8)	94	110
(9)	48	82

Temperature—100.2 on 2nd day, 99 on 3rd day and from then on practically normal.

Urinary findings—Day	Sp. gr.	Alb.	Microscop.
(2)	1012	0	0
(3)	1008	Slight trace	Many R.B.C.
(4)	1004	Slight trace	Few R.B.C.
(5)	1004	0	Few R.B.C. & Ep.
(6)		0	Few R.B.C.
(7)		0	Few R.B.C. & Ep.

Blood findings...............

'Phthalein ....

Result—Recovery 13th day.

Case V.

Minnie M.—Admitted February 5, 1916. Age 40 yrs. Female. Married. Housewife. Service of Dr. Cross.

Amount taken—Two 7½ gr. tablets mistaking them for aspirin. Later acknowledged intent.

Vomiting began...............

First lavage—Fifteen minutes after taking.

Early treatment—Lavaged by ambulance surgeon fifteen minutes later.

Condition on admission—Complains of no pain. Seemed quite nervous. Physical Examination negative except for slight enlargement of thyroid.

General treatment—Lavage q 12 h for 6 days then q d for 7 days. Colonic irrigation 2% Soda Bicarb. q 12 h for 13 days then q d for 5 days. Hot pack q d for 13 days. Allowed chair on 18th day. On 7th day allowed eggnogs, on 11th toast and cream of wheat, on 13th rice, spaghetti, bread, sweet butter, soft eggs, jellies, milk toast and green vegetables.

℞.

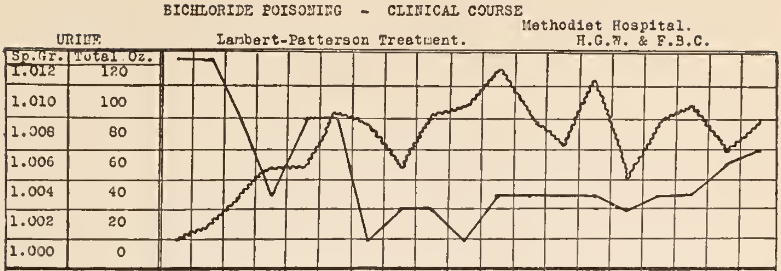
Potass. Bitart. dr. i.
Sugar dr. i.
Lactose ozs. i.
Lemon juice dr. i.
Boiled water ozs. xvi.

Sig. ozs. viii q 2 h act. c milk for 13 days, then q 3 h.

Fluids (*ozs.*) Day	Intake	Urine
(1)	?	64
(2)	100	51
(3)	192	166
(4)	192	110
(5)	192	112
(6)	190	171
(7)	220	205
(8)	132	123
(9)	192	138
(10)	196	124
(11)	166	140
(12)	196	138
(13)	190	100
(14)	120	170
(15)	100	76
(16)	96	84

Temperature—Between 99 and 100 first two days then normal.

Urinary findings—Day	Spr. gr.	Alb.	Microscop.
(2)	1010	Cloud	Few R.B.C.
(3)	1005	Trace	Ep. & Few R.B.C.
(6)	1002	0	Ep. cells
(7)	1010	0	Few Ep. cells
(8)	1010	0	" " "
(9)	1005	...	....
(10)	1018	...	....
(11)	1010	...	....
(12)	1005	...	....
(13)	1008	...	....



Albumin	+++	+++	+++	+++	++	++	++	+	+	+	+	0	0		+	0		0	
Epithelium	+++	+++	+++	++	+++	+++	+	+	+	+	+	0	0		0	0		0	
Caste	+++	+++	+++	+++	0	0	0	0	0	0	0	0	0		0	0		0	
Hg.in Lavage	+++	+++	+++	+++	+++	+++	++	++	+	0	0	0	0	0	0	0	0	0	

Solid line represents sp. gr., broken line urine. Each space shows one day's treatment.

(19) 1005 ... .

Blood findings...............

'Phthalein ....

Result—Recovery 20th day.

Case VI.

Margaret R.—Admitted Mar. 31, 1916. Age 24 yrs. Female. Single. Stenographer. Service of Dr. Cross.

Amount taken—Lysol ozs. iii. Two 7½ gr. tablets Bichloride. Illuminating gas.

Vomiting began—Immediately after taking tablets dissolved in lysol. Lasted 2 days.

First lavage—About five hours after taking tablets on admission to the hospital.

Early treatment—Stimulated with Strych. Sulph. gr. 1/15. Atropine 1/75. Camphor in oil gr. vi. Later given 1 Amp. Strophanthin. Lavage on admission c 3 gal. Soda Bicarb. Sol. Milk ozs. xlviii was introduced through the tube, allowed to remain in a few minutes and then washed out. 50% Sol. Spts. Frumenti introduced and washed out c Soda Bicarb. Sol. Pulmotor used for labored breathing.

Condition on admission—Unconscious. Pulse almost imperceptible. Respirations labored and very slow. Lysol odor to breath. Lips and mouth burned. Pulmotor used and breathing improved. Regained consciousness ten hours after first taking poison.

General treatment—Lavaged q 6 h for 2 days. B. i. d. for 4 days then q d. for 8 days. Hot pack q d. Murphy Drip 75% Potass. Acet. Sol. beginning on 2nd day.

℞.

Potass. Bitart. dr. i.
Saccharose.
Lactose aa dr. i.
Lemon juice ozs. i.
Boiled water ozs. xvi.

Sig: ozs. viii alt. c q 1 h p. o.

Fluids (ozs.)	Day	Urine
	(1)	14 recorded
	(3)	8 — recorded

(5) 16 — "
(7) 42 — "
(9) 45 — "
(11) 18 — "
(13) 59 — "
(15) 77 — "
(17) 53 — "
(21) 46 — "
(27) 42 — "
(31) 47 — "

Temperature—Irreg. from 99 to 101.8 until 7th day when it began to drop. Flat on 18th day.

Urinary findings—

Day	Alb.	Microscop.
(1)	0	R.B.C. W.B.C. Ep.
(2)	Trace	Few Ep. & R.B.C. Many W.B.C. Few coarse gran. casts.
(5) (6) (14) (17)	Practically normal except for very faint trace of albumin.	

Blood Findings—5th da.
4,352,000 R.B.C.
80% Haem.
9,600 W.B.C.
80% Polys.
5% Small L.
12% Large L.

'Phthalein—
48% excretion in 2 hrs. on 32nd day.

Result—Recovery 33rd day.

Case VII.

Fannie C.—315 4 Av. 21 yrs. Operator. Admitted April 9, 1917: d. April 11. Service of Dr. Cross. Took 15 gr. Bichlor. on April 5th. 11:05 p. m. admitted. B. P. 86 systolic 30 diastolic. Catheterized—no urine.

April 10—Reacted in pack. 6 p. m. 1 dram urine.

April 11—Died 55 minutes after pack.

Temperature—averaged subnormal.

Case VIII.

E. Virginia S.—Hosp. No. 22,200. 15 grains. Nov. 1, 1916. Service Dr. Cross. Lavaged within ½ hr. in M. E. H. 1 hr. later.

Discharged cured, Nov. 28.

Treatment identical with Cases 3 to 6 (details on large diagram).

Case IX.

Anna J. H.—May 6, cured May 19. 61 yrs. F. W. H'Keeper. Service of Dr. Webster. 10 gr. Bichlor. by mistake of druggist—evening of May 5 with 10 gr. Jalap Powder. Pain and burning in esophagus and stomach. Syr. of Ipecac promptly (about 15 minutes): white of egg: vomited. Bloody stools and abdominal tenderness.

May 7—Trace of Hg.

May 11-12—None.

May 6-7—Lt. cloud alb., hyalin and many gran. casts. No Hg. in urine.

Temperature—99.8—P. 104.

Urine—98-117-140-106-77-71-72-46-48-51-41-24 ozs.

May 10—Fl. & Far. diet t. i. d.

May 6—Saline Colonic

Pot. Acet. dr. i. } replaced Murphy drip
Aq. Oi. } which could not be longer endured.

May 9—Lavage made q 2 d; stopped May 13.

May 16—W.B.C. 12800.

'Phthalein—62.7.

SURGERY BEFORE OR AFTER CONSTITUTIONAL TREATMENT IN TUBERCULAR CONDITIONS

Ellis Bonime, M.D.

New York City.

I CHOOSE this topic for the reason that surgery in tuberculosis has not been satisfactory so far. We persist in surgical procedures because there seems to be nothing else to do for the relief of the local condition; but, in consequence, the number of cases that are injured are so many that it seems to me we ought to get together and do more team work in the cases of surgical tuberculosis. I don't believe the subject has been given sufficient consideration from a scientific standpoint. The dissimilarity between pyogenic and tubercular conditions is not distinctly brought out, though a realization of this difference would bring about a better outcome.

There are many open bone and joint and adenitis cases as well as other tubercular conditions that arise and, in spite of surgery, continue and get worse. I am going to try to explain this by case reports and lantern slides rather than by theoretical discussion for a purely scientific paper on the subject would be so long it would defeat its own object, a comparison of cases bringing forward the practical aspects much more distinctly.

But first I might devote a few moments to the mechanism of tuberculosis and its processes of which two can be considered; (1) anemia, instead of hyperemia as in other infections, and (2) low leucocytosis, contrary to what it is in most other infections.

Hyperemia is one of the principle conditions in a localized infection; it causes dilatations of the blood vessels, permitting a greater volume of blood circulation into cellular spaces and a larger amount of blood brings about greater temperature at the point of infection, inhibiting the growth of bacteria. This constitutes a mechanism of defense on the part of the individual. In tuberculosis we have neither hyperemia nor leucocytosis so necessary in combating the invading organism. We have some resistance, but it is not to be compared to that of an ordinary infection.

Another consideration in tuberculosis is the character of the immune response. The immune response in the usual infection lies in the formation of antibodies or antitoxins which are aimed at the invading organism and the by-products that are produced as a result of the antibody and bacteria combination are foreign substances which are innocuous to the individual and are eliminated through the usual channels.

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* Address delivered before the Brooklyn Medical Society, May 18th 1917.

In tuberculosis, as the antibodies we have the lysins. The biochemical action between the lysins and the tubercle bacilli produces as a by-product, a protein which to some individuals is poisonous. The poisonous effect is known as the constitutional reaction and the state of the individual who is susceptible to this poison is known as hypersusceptibility.

Nearly everybody suffers an invasion of the tubercle bacilli sometime during life; we know how universal the invasion is for records of autopsies have demonstrated that tuberculosis is a universal disease. Still, only one-twelfth of those attacked finally develop an active tuberculosis. All of these cases can be demonstrated to possess hypersusceptibility to the above described protein poison by the tuberculin test. This brings us to the fact that hypersusceptibility is nothing more than an individual idiosyncracy such as can be found in individuals who may be poisoned by substances in food which are harmless to the great majority. This hypersusceptibility is a state of allergia or anaphylaxis exactly the same as that produced in some individuals by animal or vegetable proteins. Hypersusceptibility to the tubercular poisoning is acquired as a result of the first invasion and when the disease becomes active this same hypersusceptibility or idiosyncracy stands in the way of a complete cure, in the same sense that a complete cure takes place from other infections. Since the protein poisoning is given off as a result of the immune response, the more intense the defense, the larger the amount of protein poisoning produced and the greater the individual reaction following the response. Thus we have the vicious cycle of tuberculosis; the very element of defense becomes an offense. It is this fact that has made the treatment of tuberculosis so difficult and rendered the disease so chronic.

What is the aim of tuberculosis therapy? In the first place, to stimulate the immune response which is naturally mild in tuberculosis. It becomes exhausted through the chronicity of the disease. In the second place, tuberculin controls the amount of immune response in such a manner that the individual tolerance to the protein poison will rise by degrees until complete tolerance is established. Once this is accomplished, tuberculin will act as a vaccine in all other infections. The tolerance can be raised only through the production of a maximum amount of poison which falls short of the production of a poisonous effect. During the constitutional reaction, the resistance of the individual is so lowered that the disease has a chance to progress more rapidly than it did before. Hence, a constitutional reaction lowers the tolerance. It is therefore absolutely necessary to avoid reaction in order to establish complete tolerance. However, a mild constitutional reaction is necessary in order to ascertain the maximum amount of tuberculin that can be tolerated by the individual, but care must be taken to reduce the amount of tuberculin in proportion to the amount of tolerance lost as a result of the mild reaction. Once complete tolerance has been gained, we have done away with the constitutionality of the disease.

If we can render the tubercular process localized, then surgery may be applied when indicated, but surgical measures are unwarranted in the treatment of a local manifestation of a constitutional disease. Tuberculosis is a constitutional disease, and in applying surgery one is apt to lower the resistance as a result of the operation itself and accordingly raise the susceptibility to the disease.

If we are to apply surgery in tuberculosis, it is essential to first render the disease local, which can be done by a course of tuberculin, Once we have come to the point where the largest dose of tuberculin can be tolerated without producing a constitutional reaction, tuberculosis as a constitutional disease is cured and we have only to deal with the local manifestation. In syphilis they first tried to remove the primary lesion and disaster followed. That it is simpler to infuse salvarsan and give hypodermics of mercury, than to administer tuberculin, is no reason why we should discard such an effective measure. That the two diseases are analagous cannot be denied.

We aim to simplify tuberculin therapy so that it can be used by the general practitioner, which is very essential as the treatment of the large majority of the tuberculous is now carried out by the general practitioner. So long as this therapy is not applied by the general practitioner, so long will this disease remain a menace to the community and the death rate from it continue. Anti-Tuberculosis leagues and societies and the principles of hygiene have done much by way of prophylaxis, but the tubercle bacilli are so widely distributed that unless every doctor in his community can take care of his cases, we cannot hope to eradicate the disease.

All tuberculin therapy aims to do is to overcome the individual hypersusceptibility; it does not aim to cure the disease. But that is sufficient, as the patient can utilize a more intensive immune response to complete the cure. The natural response of the human race is sufficient to overcome the tubercular infection, once the hypersusceptibility is removed and there is no interference with the proper defensive mechanism of the body.

I have here ten lantern slides demonstrating recurrent tubercular glands after radical operation. Six of the ten had had from two to four extensive operations. The main point brought out in these glandular cases is the wide spread of the tubercular glands occupying the anterior and posterior cervical region, carotid region, supraclavicular region and suprasternal region. There were two cases with extensive involvement of the axillary region. One case was complicated by retropharyngeal abscess and cervical Potts'. These cases have finally been cured by tuberculin, several demonstrating recurrences after two or three radical operations on one side of the neck and tuberculin treatment for extensive glands on the other side of the neck, showing plainly the difference of the end results between cases cured by major operations, even if locally successful, and cases cured by tuberculin.

Four of these cases showed plainly drop shoulder, two showed facial paralysis and one showed limitation of motion of the head due to contraction of scars. The advisibility of reducing a constitutional tubercular disease by a course of tuberculin, thereby localizing the lesions before surgical interference, is made self evident by these cases.

Forty more slides demonstrate cases of bone and joint tuberculosis, some showing conditions where tuberculin alone was sufficient to accomplish a cure. But there were cases where the circulation around the lesion was so poor that antibodies could not reach the lesion and tuberculin would prove of no avail unless Bier's hyperemia was used in conjunction. Several cases showed prominent lesions on account of mixed infection; in these vaccine, in conjunction with tuberculin, played the principal rôle in the cure of the patient. Other cases showed definitely so much local destruction that neither tuberculin nor vaccine, although removing the infections, could replace the destroyed tissue. The accumulation of serious discharge was due to negative osmosis towards the cavity, preventing contraction or healing of the cavity and sinuses of fistulas that communicate with the surface. In the cure of these bismuth paste was the most important factor. Bismuth paste, by its high specific gravity, prevents the negative osmosis and by acting as a foreign substance, stimulates the contraction of tissue.

But all these agents, Bier's hyperemia, vaccine for mixed infection, bismuth paste and orthopedic appliances, merely mean the treatment of the local condition. Tuberculin is necessary in every case, first and foremost to overcome the constitutional disease. But he that expects complete disappearance of all signs of disease through tuberculin alone is bound to meet disappointment. Just as it is important to treat the constitutional disease it is also necessary to apply the necessary therapeutic measures locally. I have come here to-night, not as an exponent of tuberculin, but as the advocate of the "Combination Treatment" of tuberculosis.

EDITORIAL

"DRINK TO ME ONLY WITH THINE EYES."

THE following editorial from the New York Times of July 30 is well worth reading, not only for the Horatian quality of its flowing numbers, but also for the light it casts on practical prohibition:

POTABILITY OF THE NON-POTABLE.

To what dost thou not compel the human stomach (mortalia pectora), accursed thirst for strong waters? Stalwart is the breed of men brought up in the zephyrs of the Banana Belt, yet at the oak-and-triple-brass interiors of some of them, the sociologist marvels. Those South Dakotans, for instance, clients of a druggist whose arrest reveals their powers, seem incredible. The State prohibition law allows a druggist to sell "non-potable" alcohol. This druggist was haled into court for vending a mixture, an intoxicating bowl, compounded, he told the Judge, fearfully and wonderfully thus:

Denatured alcohol, one gallon; carbolic acid, two drams; wintergreen, one dram.

Is this potable? After deep potations, the potators thereof live and give evidence. Is it non-potable? By any human being, you would say, by any imaginable animal except a cross between a shark and a salamander. The South Dakota connoisseurs prove that you are wrong.

While we may shudder at their taste, their viability stirs admiration.

How can one read of these human salamanders without realizing the truth of that classic song of the palmy days of comic opera when Francis Wilson delighted a generation that is now growing gray as to its upper extremity and rotund at the belt, "Love Will Find A Way?" Deprive the Eskimo of seal blubber and he will devour your toilet soap with keenest relish. Who has not heard the story of the American lady who missed her box of "vanishing cream" in the Berlin hotel and learned that the chambermaid had spread it on her bread in lieu of butter? The story may be apocryphal but it recites a fact. This is but another example of the immediate effects of the withdrawal of alcoholic stimulants from a class of people who are not educated to the point of abandoning it because it is better not to drink alcohol. In the prohibition State of Vermont where alcohol is forbidden as a beverage, but where denatured alcohol is procurable for commercial purposes, the writer has seen denatured alcohol drunk in 4 oz. portions by the choice spirits of the village from a keg that they kept in the hay mow. This is not told to discredit prohibition in Vermont, but merely to emphasize the fact that the unreasoning human animal will get what he wants when he wants it. There are a variety of human occupations and amusements which we have not yet been able to legislate out of fashion—homicide, for instance. These Vermont topers have all since died as a result of the continued use of this gum tickler that they substituted in their extremity for the less pernicious fire water of commerce.

It must not be understood for one moment that the present communication is to be construed as against wartime prohibition; on the contrary, fairness demands that if the soldier and sailor may not drink, then the civilian must not drink either. Most business houses have long made it a rule to restrict drinking among their employees. Their grounds have been purely utilitarian: they have done it because drinking interfered with business. On this basis it is right and proper that the whole commonwealth should buckle down to wartime conditions and keep sober. As time goes on it will be generally recognized that it is better not to use alcohol as a beverage. Medical practice is conforming itself to this belief. Twenty years ago the routine treatment of typhoid fever consisted in the administration of whiskey every two hours and today few hospitals follow that plan. A century ago Dr. Todd, of London, stimulated his fever cases with brandy and water until the name became attached to the drink and "toddy" it has been ever since. As the old parson once remarked, "though I didn't intend it, this discourse has degenerated into a temperance talk." It started in fear and wonder at the capacity of the human stomach and it ends with the thought that even if a few of the human species are fools enough to drink poison, the general proposition is a fair one and the country at large will eventually be the gainer.

H. G. W.

THE HEALTH OF OUR ARMIES.

IT is of more than passing moment to study the attitude of the daily press upon this all important question. It is evidently recognized by all editorial writers that efficiency depends upon health and that health depends upon an able medical corps backed by governmental authority. The angles from which the subject is approached, however, are almost as varied as are the expressions of opinion.

The New York Times in a recent editorial dealing with the subject of health in our armies gave extended attention to the dangers of tuberculosis, its probable increase under the stress of campaign conditions and the necessity for care in the preliminary selection of recruits so as to prevent the enlistment of those with a tuberculous taint, and various other aspects of the white plague problem. Typhus and typhoid were discussed and an intelligent presentation of such infectious conditions as the various types of streptococcus invasion, with their effects on the heart and kidneys, but not one word was said of the venereal peril.

In striking contrast is the courageous attitude taken by the

New York Evening Post which has begun the publication of a series of articles dealing with these most widespread of diseases. To one who realizes the fundamental importance of attacking a class of diseases which are largely fostered through ignorance, secrecy and prudery, this beginning by an influential lay paper of an intelligent crusade for a better understanding of the subject is most refreshing. Just what the effect on the public mind will be is largely a matter of surmise. It is more than likely that the first effect will be to shock the prudes, stimulate the curiosity of the prurient minded and open up vistas of amazement for the innocently ignorant, but in the end there is little doubt that the constant intelligent presentation of this theme will bear fruit in awakening a large number of thoughtful people to the necessity for grappling with the problem in the open; for just as the magician's power to entertain is lost when his tricks are understood, so is the lure of the unknown destroyed by perfect understanding. It is the mystery and the secrecy which are thrown about the discussion of sexual hygiene in the family and in the school that furnish the allurement to the juvenile mind; yes, and to some older minds too. The fact remains that venereal diseases are more prevalent than tuberculosis: the insane asylums are filled with their victims; blind babies, cripples and invalid wives by the thousand are the tangible evidence of what ignorance and folly have accomplished: and now a million or more of the finest specimens of physical manhood that the country can produce are being gathered together under conditions that are sure to propagate these diseases as toadstools spring from mould. This is not speculation, but the most undoubted fact. The writer is personally cognizant of one case in Brooklyn in which a wayward girl, suffering from gonorrhoea, infected fourteen naval recruits in one week and would probably still be spreading the hideous disease that afflicts her if the last victim had not "squealed" to the police. Multiply this incident by thousands, figure every concentration camp in the country as the goal toward which hundreds of such women are attracted and then consider the effect on the next generation of mothers and children. Too much cannot be said in condemnation of that attitude of mind that strives to keep itself from the contemplation of these facts.

The New York Post has done well and will do better yet inasmuch as others will doubtless open up the trail it has begun to blaze.

H. G. W.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting of this Society held on Thursday, April 5th, 1917.

The President, JOHN E. JENNINGS, M.D., in the Chair.

Report of cases:
A. Papilloma of the Urinary Bladder. Three Patients.
Robert B. Anderson, M.D.
B. (1) Rupture of Intestine. Two cases.
(2) Osteo-Sarcoma of the Femur.
(3 Pyloric Occlusion. Frank D. Jennings, M.D.
C. (1) Chronic Intestinal Obstruction. Operation. Recovery.
(2) Traumatic Femoral Aneurysm. Operation. Patient.
Edwin B. Wilson, M.D.
D. (1) Mobilization of Ankylosed Tuberculous Hip. X-Ray. Patient.
(2) Plastic Operation for Absence and Webbing of Fingers. X-ray. Patient.
Walter Truslow, M.D.
Paper:
"The Diagnosis of Sarcoma of the Stomach and Intestines: With Reports of Cases."
William Linder, M.D.

Discussion opened by
William B. Brinsmade, M.D.
William C. Woolsey, M.D.

Three Cases of Papilloma of the Urinary Bladder. Two Patients.

Robert B. Anderson, M.D.

The first case I have to report is that of this gentleman, C. F. C., age 45, nativity Scotland, occupation master mechanic.

Family History: Negative.

Personal History: In August, 1912, when in apparent good health, the patient had a severe attack of hematuria which lasted for four or five days and cleared up entirely with rest in bed. No history of difficult, painful or urgent micturition. An indefinite sensation of discomfort in the lumbar region. On August 12th, 1913, he had another attack of hematuria. This attack was worse than the first. Cystoscopy: Posterior urethra very tender; considerable vesical hemorrhage. In the region of the mouth of the right ureter and extending toward the right wall of the bladder there was a villous growth about the size of a hen's egg. Intravesical high frequency cauterization through a cystoscope was advised.

August 19th, 1913: Oudin current applied with difficulty on account of hemorrhage. Hemorrhage partially checked.

August 26th, 1913: Tumor blanched (pedicle not attacked).

September 9th, 1913: Tumor diminishing in size; some cystitis; small pieces of growth washed away. No hemorrhage.

September 23rd, 1913: Small portions of tumor washed away, leaving a rugged base, whic hwas cauterized by the Oudin current.

September 16th, 1913: Tumor about one-half the original size.

September 30th, 1913: An ulcerated area a little smaller than a quarter, present. Patient discharged with instructions to return after one month for cystoscopic examination.

Examination of the patient on his return, December 20th, 1913, showed a small growth about the size of a marble, at the site of the base of the former tumor.

January 28th, 1914: Tumor blanched and broken up into small pieces.

February 5th, 1914: Small ulcer about the size of a dime, present. Current applied.

October 19th, 1914: Cystoscopy showed the bladder to be normal and the ureter mouths normal. The urine was found to be negative on analysis.

Summary: Time incapacitated on account of treatment, 2 days. Duration of treatment, 2 months and 2 months respectively.

The next case is that of F. G., 41 years of age, male, nativity U. S., occupation lithographer.

Family History: Negative.

Personal History: For the last two years he has suffered from intermittent attacks of blood in the urine. For the last three months the hematuria has been continuous, but more severe at certain periods than others. Small clots are frequently passed. Frequency about every hour or two at night and same for day. There is no painful or difficult micturition except when clots are passed. The patient has lost about 30 pounds and has been unable to work on account of loss of flesh, strength and sleep.

April 29th, 1916: Cystoscopy showed the posterior urethra to be tender. Considerable vesical hemorrhage. In the region of the mouth of the left ureter and extending forward and inward, toward the internal urinary meatus, there was a villous growth a little smaller than a tennis ball. The mouth of the left ureter was not found, the whole area being covered with the growth.

May 6th, 1916: High frequency cautery, Oudin current. Hemorrhage partially controlled.

May 13th, 1916: Tumor blanched. Hemorrhage checked.

May 20th, 1916: No hemorrhage. Considerable cystitis. The growth comes away in small pieces. The patient feels much better; has returned to his work. Pedicle growth located and current applied to the pedicle.

May 27th, 1916: No hemorrhage; less cystitis. The tumor has diminished to about one-half its original size. Chunks cast off the growth. Patient gaining rapidly in weight and strength.

June 3rd, 1916: Current applied to the whole periphery of the pedicle.

June 10th, 1916: The tumor has nearly disappeared. Base cauterized.

June 17th, 1916: Linear ulcer present in the region of the growth. Patient discharged and instructed to return after one month for cystoscopic examination.

August 5th, 1916: On cystoscopy two small growths were found at the site of the base of the parent growth. These were cauterized with the high frequency Oudin current.

August 12th, 1916: Growth disappeared. Area covered with mucous membrane slightly paler in color than the adjacent areas. Mouths of the ureters normal. Bladder normal. Micturition normal. Urine analysis negative.

Summary: Time incapacitated on account of treatment, none. The patient was able to resume work after the third treatment. Duration of treatment, 4 months and one month respectively.

The patient in this case I am unable to present for the reason that he is in a regiment and has gone out of town.

H. C., male, single, 31 years old, nativity Canada, occupation mechanical engineer.

Family History: Negative.

Personal History: In passing a sound in the treatment of a soft infiltration of the deep urethra, a severe hemorrhage took place. The patient was put to bed and the hemorrhage ceased after four days' rest.

On January 17th, 1914, in passing a sound the same thing took place again.

January 28th, 1914: I made up my mind that I would go in and see what it was. On cystoscopic examination a villous pedunculated growth about the size of the end of one's thumb, just behind the interureteric band, about midway between the ureters, was found. There was considerable vesical hemorrhage. High frequency current applied to the pedicle.

February 6th, 1914: Moderate degree of cystitis. Small elevated area about the size of a ten-cent piece, at the site of the growth. This area was cauterized.

February 13th, 1914: Area about half healed over. No high frequency cauterization done.

April 22nd, 1914: Cystoscopy—no trace of the site of the growth. Bladder normal. Mouths of the ureters normal. Analysis of urine negative.

Summary: Time incapacitated on account of treatment, none. Duration of treatment, one month.

Number of Tumors: From August 12th, 1913, to about July 1st, 1916, there have been eight cases that have been treated by this method that I have been able to follow. In six cases the tumors were single. In one case there were four small growths along the line of a scar of a previous operation for removal of a vesical growth, and one was a case of papillomatosis.

Location: In five cases the growths were in the region of the mouths of the ureters—one along the line of an old scar and one a very small growth near the left side of the internal urinary meatus, one a papillomatosis.

Duration of Treatment: The longest period was eleven months. The shortest was three weeks. Average, about three and a half months.

Time Incapacitated on Account of Treatment: Four cases lost no time at all. One case invalided for three months, was able to return to work after the third treatment. Another with multiple growths resumed work after the seventh treatment. One lost two days and another three days.

Time Since Patients Were Discharged As Cured and on Cystoscopic Examination Found to be Free of Vesical Growths: One, three years ;one, two and one-half years; one, twenty-six months; one, twenty-five months; one, eleven months; one, ten months; and one, about nine months each.

Are These Patients Cured? To the cystoscopic eye, their bladders are normal. The vesical functions are normal. Time and frequent endovesical examinations alone will tell.

To the cystoscopic eye, I believe it is impossible to tell a malignant from a benign papilloma. Purposely, I have omitted the microscopic examination of the minute portions of growth obtained by the endovesical punch. I believe it is asking too much of a pathologist to determine the malignancy of a growth from such small peripheral pieces. The results have been misleading and contradictory to the clinical findings and the procedure has been abandoned. When the tumor, as it were, withers away, the bladder capacity increases, hemorrhage ceases and the viscus is approaching the normal, continue the treatment until the growth is destroyed. Then give the bladder time enough to repair its mucous membrane, and re-examine for recurrences. But when after four or five endovesical sittings with a high frequency machine that works properly, no improvement, visual or functional, takes place, endovesical high frequency cauterization should be discontinued and the open operation with removal of the growth by cautery, recommended.

Dr. Nathaniel P. Rathbun, in opening the discussion, said:

"I would like to congratulate the doctor on his case reports and also to subscribe to the importance of treating these cases with the high frequency current. I believe that, to a certain extent, at the present day these cases are treated too much by the open method. They are apt to recur when treated by the open method, either at the site of operation or at the site of contact with some other part of the incision, the so-called 'kiss' tumors.

"The doctor referred to the difficulty of making a diagnosis by microscopic examination of sections of the growth. I think that is bad surgery for the reason that metastasis or implantation is liable to result.

"There is one point in the diagnosis which the doctor brought out which is important, and that is the question of response of the growth to the high frequency current. Given a case that does not respond to the high frequency current you may be sure that you are dealing with malignancy; and they have the same cystoscopic appearance and the same appearance when the bladder is opened. I have one case under my care in which a papilloma recurred, not at the site of operation, but a short distance away, and repeated sparkings had no effect on it at all. I decided on open operation in that case and removed the growth through a suprapubic incision. It had all the appearance of a papilloma, but proved to be a papillary carcinoma.

"There is one other point which I would like to touch upon and that is to remove these growths by simple cautery is not enough. I believe the bladder wall adjacent to the tumor should be removed, the area removed being as wide as possible, and with the cautery. I believe you can cure them in that way occasionally, and I believe you can get a cure of a carcinoma in that way."

Dr. Robert B. Anderson, in closing the discussion, said:
"I have nothing in particular to add except to say that that first case gained twenty-two pounds after treatment. It seems to me that in benign papillomata the dominant symptom is a painless hematuria. When you get a case of that kind do not put a sound into him. Put a cystoscope in and put it in carefully, because if you do get up a hemorrhage you are making trouble for some one that wants to cystoscope him."

Pyloric Occlusion. X-ray.

Dr. Frank D. Jennings.

O. R., 24, married, tinsmith, 24 Central Ave., Brooklyn. Admitted July 23rd, 1916.

Family and previous history contains nothing of importance.

Present History: On the night prior to admission the patient was drinking heavily. Early in the morning his thirst was so great that he began searching the house for something to assuage it. In a cupboard he found a bottle of brown liquid which in his befuddled state he thought was whiskey. He drank about two ounces of it, immediately felt great burning and pain in his mouth, throat and stomach; vomited quantities of a bloody fluid, collapsed and was brought to the hospital. The brown liquid was lysol mixed with hydrochloric acid.

During the three days following admission there was constant vomiting of bloody, mal-odorous fluid with mucus. Vomiting of this character persisted in diminishing degree for two weeks and was always aggravated by ingestion of liquids.

In the third week the character of the vomiting changed in that it was less frequent and more abundant until it got so that he would vomit once or twice during twenty-four hours, at those times ejecting all food that had been taken, since the last attack.

His general condition deteriorated rapidly. Rectal alimentation was used, and feeding of liquors attempted at intervals but was invariably followed by vomiting.

In the third week a roentgenological examination by Dr. Forbes disclosed practically complete stenosis of the pylorus. The patient was thereupon transferred to the surgical side.

On August 19th a high right rectus incision was made. The findings corroborated the x-ray in that the entire distal end of the stomach was converted into a dense, leathery, scirrhus mass. The peritoneal covering of the stomach was in no way involved. A short loop posterior gastro-enterotomy was done. He did not stand the operation very well and was given a hypodermoclysis of 150 mils on the table. He, however, rallied quickly and made a smooth recovery. Vomited on the second day, post-operative but was relieved by one lavage. He was on light diet by the fifth day, full diet by the tenth, that being the day he was alolwed up, sutures having been removed on the eighth day.

Rupture of Intestine.

Dr. Frank D. Jennings.

Family History: Negative.

Previous History: Negative.

Venereal History: Venereal infection denied.

Alcohol: Moderate drinker of beer.

Present History: On August 28th, 1915, was lifting a barrel weighing 90 lbs. on to another barrel by pulling it on to his thigh and then shoving it up and forward, when he felt a sharp stabbing pain in the abdomen. He was unable to continue at work, and walked home, a distance of several blocks, and went to bed. He began to vomit; the abdominal pain grew more severe and he sent for an ambulance. On admission, about three hours after the inception of his troubles, the rectal temperature was 99°, respiration 24, pulse 92. His facies indicated extreme suffering, the abdominal wall was rigid. The white cell count was 9,760, 82% polymorphonuclear leucocytes. He was taken to the operating room as soon as he could be prepared. A right rectus incision was made and on entering the abdominal cavity, fluid of fecal appearance and odor gushed out. Search of the small intestine disclosed a perforation approximately two feet above the ileo-caecal valve. This was repaired. No other perforations were found. The abdomen was thoroughly sponged out. Drainage was instituted by a split rubber tube through a suprapubic stab wound, the operative incision being closed tight.

His post-operative course was very stormy. Acute bronchitis with persistent cough developed. Abdominal distention was extreme and continuous with profuse vomiting. Repeated lavage with enemata succeeded in making him tolerably comfortable by the fourth day. Dressings over the drainage opening were changed frequently and the tube shortened.

On the eighth day the dressings on the incision were removed and the discovery made that there had been no repair in the wound, the edges of which were separated, the intervening gap being plugged by omentum.

He was taken to the operating room the next morning and the wound once more sutured. Broncho-pneumonia promptly ensued with death from pulmonary oedema on the fourteenth day.

Rupture of Intestine.

Frank D. Jennings.

P. N., 46, single, longshoreman, Sweden.

Admitted August 28th, 1916.

Family History: Both parents dead, cause of death unknown. Has four sisters and six brothers, but knows nothing about them.

Habits: One glass of whiskey before breakfast every day. Three glasses of beer daily. Tea, coffee and tobacco in moderation.

Venereal History: Sore on penis twenty years ago. Gonorrhea twelve years ago.

Previous History: Infectious diseases of chilhood: Fracture of forearm and sprain of ankle at 14. At 33 operated on in Marine Hospital, San Francisco, for bilateral inguinal hernia and at same hospital two years later for a recurrent hernia on the right side.

In 1905 while lifting a barrel of oil, weighing about two hundred pounds, the barrel slipped from his hands and he made a sudden violent muscular effort to save the barrel from rolling off the deck. As he did so he felt a sudden, intense pain in the abdomen and collapsed on the deck. He was taken into the Marine Hospital and promptly operated on for what he states was rupture of the intestine.

After a slow recovery he resumed his seafaring life and two years later was helping to "jack" a timber weight four hundred pounds along a boat deck, when the timber slipped off the rollers on which it was placed and he again made a quick, violent muscular effort to save the timber from going overboard and again dropped to the deck with agonizing abdominal pain. He was taken at once to the hospital in Aberdeen, Washington, and was operated on for rupture of the bowel.

Present History: On August 28th, 1916, was working as a stevedore unloading a cargo when a half-hogshead of tobacco, which was being hoisted by a block and fall, fell about five fet, knocking the patient to the deck and then rolling over his abdomen and right arm.

On his admission his temperature was subnormal; the pulse rate was eighty. He was suffering intensely from pain referred to the whole abdomen. Rigidity of the anterior abdominal muscles was classical.

A diagnosis of ruptured intestine was made and he was operated within three hours after the injury was sustained. An incision was made between the scars of the previous laparotomies. Intestinal contents gushed out as the peritoneum was opened. The perforation was located in the ileum, eighteen inches proximal to the ileo-colonic junction and was closed. Considering the very short interval, a well-marked peritonitis was actively present. The peritoneal cavity was "mopped" as clean as possible, a cigarette drain introduced and the wound closed.

Post-operative course was stormy for the first two days and thenceforth uneventful. He was out of bed in a little over three weeks and discharged in five weeks.

During the course of the operation the entire small intestine was searched, but only one cicatrix was noted. It is possible that in haste one may have been overlooked or that the second rupture had occurred at the site of the first one. The cicatrix observed was proximal to the third rupture by a distance of two feet.

Despite his statement that he was never constipated, the colon from the ileo-caecal valve to the anus was filled with scybala. This, together with an abdominal musculature of low tone, were the only factors observed that could in any sense be considered predisposing. The peritoneal cavity was singularly free of adhesions in view of the two traumatic disasters it had passed through.

It is worthy of comment that his first two ruptures followed lifting, a cause which I have ben unable to find listed in the literature.

Osteosarcoma of the Femur. X-ray and Four Negatives.

Dr. Frank D. Jennings.

B. H., Russia, 22, suit case maker.

Date of admission, April 19th, 1916.

Family History: Negative.

Previous History: Negative, except for an operation done in Warsaw, Poland, twelve years ago for the cure of a thyreo-glossal fistula.

Habits: Good, indulging moderately in alcohol and sparingly in tobacco. Venereal infection was denied.

Present History: Five or six weeks prior to admission patient noticed a pinching sensation in the right popliteal region upon sitting down. Two weeks after noticing this, he, while at work, slipped coming down stairs, falling five or six steps, striking the outer surface of the right knee, causing an abrasion of the skin over the knee. He stated that there then developed a swelling above the joint and that motion of the joint became restricted and somewhat painful. He consulted a number of physicians, who all advised external applications of one kind or another, during a period of three weeks, his symptoms persisting and the swelling steadily getting larger until finally he was seen by Dr. Stark, who advised that a roentgen picture be taken. This was done by Dr. Wasch, who confirmed the tentative diagnosis of sarcoma made by Dr. Stark, who then advised that he enter a hospital.

Physical Examination: The patient was five feet, eight inches in height and weighed 125 pounds, representing an approximate loss of ten pounds in six weeks. His facial appearance was haggard, the skin pale. Thorax and abdomen were normal. A large, irregular scar in the mid line of the neck anteriorly was noted.

In the lower end of the femur was a tumor mass most marked postero-internally, irregular in its general contour, smooth and stony hard. It was not tender, nor was it red. There was no crackling on pressure. Skin was freely movable over it. The knee joint was held in partial flexion, otherwise was normal. Subjectively he complained of great pain.

No inguinal or other glands were palpable. Careful physical examination of the chest showed no pulmonary involvement. Blood Wassermann was negative. Blood examination disclosed 5,680,000 red cells, hemoglobin 75%, white cells 11,660, polymorphonuclears 78%. A second x-ray examination by Dr. Forbes confirmed the findings of Dr. Wasch.

The diagnosis of osteo-sarcoma was made and amputation advised. The patient refused, asking for consultation. He was seen by Dr. Woolsey who concurred in the diagnosis and urged amputation to which the patient reluctantly assented.

On April 25th, six days after admission, disarticulation at the right hip joint was done under ether narcosis. A gridiron incision was made, the peritoneum was dissected back exposing the iliac vessels. Digital pressure by the House Surgeon thereon controlled the blood supply. An interior racquet incision was made, the femoral vessels ligated, and the muscular layers divided at as high a level as possible. The sciatic, obturator and anterior crural nerves were blocked with ½% Novocain and divided. The capsular ligament of the hip joint was opened and the head of the femur disarticulated and the extremity removed. After ligating all bleeding points, the muscles were sutured loosely with plain catgut and the skin closed with silkworm over a split rubber type. Hypodermoclysis of 750 c.c of Saline was given on the table.

Post operative course was uneventful. Wound healed, per primam, all sutures were out by the thirteenth day and patient was discharged on the twenty-fifth day, much improved physically.

Pathological report by Dr. Moitrier was osteo-sarcoma.

Through the summer and early fall he continued to gain and on an artificial leg got around very well. In November he came to the hospital complaining of cough with sputum at times colored red, at other times pink. Simultaneously he developed pain in the left chest, mid axillary line and anteriorly, with considerable dyspnoea. These symptoms gradually grew worse and on December 20th, he was readmitted.

At this time he was much emaciated and in continuous respiratory distress with physical and radiographic signs of mediastinal and pulmonary involvement. Morphine was used constantly to give him relief. Dyspnoea was at all times extreme and he died on Jan. 15th of suffocation.

Permission was secured, with difficulty, to make a limited post mortem. This disclosed the lower lobes of both lungs, the parieta and diaphragmatic pleura and anterior mediastinum studded with nodules of the consistency of bone. There was a particularly large cluster at the tracheal bifurcation, extending over the right main bronchus; undoubtedly this group, by pressure, was the direct cause of death. Dr. Moitrier's report on the tissue submitted was Metastatic "osteosarcoma."

The duration of the case, therefore, was less than nine months post operative and approximately ten months following the first symptoms.

Chronic Intestinal Obstruction—Operation—Recovery.

Edwin B. Wilson, M.D.

Case No. 1.

Mrs. M. M. W., age 40, married, consulted me on March 3, 1915, for obstinate constipation, loss of weight and general ill-health.

Family History unimportant.

Past History: When seventeen years old had a bad attack of what she calls "dysentery." She is not sure as to whether she had pain, but can only remember that she passed blood and her constipation dates from that time. For many years back she has been very nervous, a condition she has attributed to her bowel trouble. Seventeen years ago was ill in bed with "inflammation of the stomach and bowels." At this time she passed blood from the bowels and the only thing which relieved her was hot turpentine stupes on the epigastrium. She was about two months pregnant at the time but went on to full term and had a normal delivery. She has had no other illness in bed. About six or seven years ago she was pregnant, but on the advice of eminent consultants the uterus was evacuated because of her nervous and physical condition. Her physician at that time has told me that she was a bad surgical patient. Ether seemed to have little effect on her, notwithstanding the fact she had had a preliminary hypo of morphine. After the curettage and "repair work," which was also done, she had a stormy time. Morphine had so little effect on her that she was suspected of being a drug addict. This, however, was satisfactorily proven not to be the case. Sometime after that she again was given an anesthetic for the extraction of a tooth and had the same experience.

Her constipation had been steadily becoming more troublesome and in the summer of 1913 she began to have trouble in the abdomen. She describes it as a feeling of pressure which sometimes would be worse in the right side and at others confined to the left. Nothing but a vigorous cathartic would relieve it. Enemata were of no avail. At no time did she have any symptoms associated with her periods.

About seven weeks ago she began to notice an uncomfortable feeling in the stomach. Soon she began to belch gas and finally to vomit very sour material the cooler of bile. This vomiting usually occurred at night after she had gone to bed and was accompanied by lots of gas, and she has noticed that since the vomiting has started she has passed practically no gas by rectum. For the past two or three weeks she has been nauseated about one hour after each meal, then begins to belch gas and finally vomits. This has never been in large quantity and is not associated with pain. For the past several months her bowels would not move without cathartics every day. She has been taking Hinckle's Cascara compound tablets, two after each meal and four at bedtime.

On March 9th she came to the Midwood Sanitorium, preparatory to a series of x-rays by Dr. Charles Eastmond. At his suggestion she was given two compound cathartic pills in capsules at night, Castor oil the second night and an ss. enema the following morning. Four ounces of bismuth sub-carbonate in one pint of milk was to be given six hours before x-rays. Before the bismuth was given she was nauseated and had such abdominal pain that her appointment with Dr. Eastmond had to be postponed. Her general picture was that of an acute intestinal obstruction. There was no result from the enema and it was impossible to get back what had been injected. After repeated efforts her enema with fecal matter was passed and she recovered sufficiently so that her pictures were taken on March 12th.

Dr. Eastmond's diagnosis is as follows: "1. There is a marked delay in the passage of food through the lower ileum. There certainly is an insufficiency of the ileo-caecal valve, and while they are not demonstrable, I believe that adhesions exist at a point about four inches from the ileo-caecal valve.

"2. There is an infantile type of sigmoid, and with this there is an associated angulation at the junction of the sigmoid and descending colon. Not only does the angulation produce a certain amount of obstruction, but I believe that this is the main obstructive point, and the one which is producing the trouble."

Operation was advised after consulting with her attending physician in Philadelphia. While she was making up her mind as to what she would do, I placed her on a diet which would give the greatest amount of nutrition and the least bowel residue, and had her take daily one or two capsules containing oleum tglii, ext. nux vomica, aloin, podcphyllin, ext. colocynth co., and powd. capsicum. This worked well and her general condition was improved so that on July 19th, 1915, I operated on her at the Midwood Sanitorium, assisted by Dr. Joseph P. Murphy, and Dr. John Sweeney as anesthetist.

Operation: One-half hour previous morphine gr. ¼ and hyoscine gr. 1/100 were given by hypo. Owing to the bad anesthetic history, spinal anesthesia of stovaine was used with a few drops of ether on an open mask during the latter part of the operation. This anesthetic was all that could be desired.

A free left rectus incision was made. About four inches from the ileo-caecal valve was found a band of dense adhesions, practically causing a Lane's kink. This band was severed close to the ileum and the upper leaf of the mesentery of the ileum plicated. Appendix removed. The entire colon was very large, especially the descending loop, and the sigmoid appeared to fill the entire lower left quadrant of the abdomen. It was moderately distended with fluid and lay on the uterus. When the sigmoid was lifted a fibroid, the size of a small orange, was found springing from the uterus high up, and so placed that when the uterus was pressed down by the loaded sigmoid it pressed the large bowel against the pelvis. This fibroid had not been detected on bimanual examination previous to operation. As yet, there was nothing seen of the sharp angulation at the junction of the descending colon and sigmoid such as was noted in the x-rays, though the first part of the latter did rise considerable. It was not until a rectal tube was passed and fluid thrown into the lower bowel that the true condition was discovered. As soon as the lower bowel was filled and began to distend, the natural point of least resistance was toward the mid line of the body and downward. As the bowel moved it was held at the junction of the lower colon and sigmoid by a dense band, or thickening of the meso-sigmoid, and a sharp obstructive angulation resulted. The mechanical result was the same whether from below, as an enema, or from above. It was now very plain that there were two factors in the obstruction. The fibroid pressed the rectum against the pelvis and shut it off more and more as the heavy sigmoid pressed down on the uterus. Then when the pressure in the sigmoid and lower colon had passed a certain point the angulation resulted. The wonder is that this patient had any movements at all.

A hysterectomy was done, and then the band mentioned above was severed by an incision which extended both ways into the outer leaf of the sigmoid mesocolon. A plastic union, the reverse of the Heinecke technique as applied to stricture of the pylorus, was then done and finally the sigmoid anchored by plication and direct suture as far out as possible. This helped to avoid the reduplication of the sigmoid on the lower colon. A large stiff Ewald stomach tube was passed from below until the end was near the splenic flexure and left for five days. The wound was closed without drainage and the patient left the table in good condition.

The next forty-eight hours were rather stormy as she was given no morphine because of her previous history and also to avoid checking peristalsis. On the third day she began to pass gas through the tube and the moderate distension she had had disappeared and did not return. After that a plain water enema was given daily through the tube, and after the fifth day a rectal irrigation was all that was needed to clear the bowel from below. An occasional dose of castor oil was given by mouth. She left the hospital just three weeks after operation.

Her improvement has been most gratifying. I heard from her a few weeks ago. She has gained about thirty lbs., is very active and has no discomforts of any kind. She has been taking mineral oil at times, and finds that an ordinary cathartic pill, like a cascara compound, is all she requires when occasionally she needs a laxative.

Traumatic Femoral Aneurysm—Operation—Patient.

Case No. 2.

George L., age 26 years, operator on fountain pens.

Present History: On October 9, 1916, while working with a tool shaped like an arrow chisel lost control of it and in his attempt to catch it in his lap drove the point into the inner side of his left thigh about the middle third. He immediately drew the tool out and says he fell as if he was shot. As he was raised by fellow workmen they noticed blood running from his pants leg. On removal of clothing a stream of blood shot some distance from the small puncture wound. A physician applied a compress and he was later removed to his home in Brooklyn. His left thigh began to swell and he had great pain in the whole limb. His condition grew progressively worse and on October 24th I saw him in consultation with Dr. Frank Dealy.

At the time of my examination he had a temperature of 101, pulse 120 and weak in character. He was pallid and showed much loss of weight. The left thigh was greatly swollen at the middle and lower third. In the region of Hunters canal was a scratch-like mark about one-fourth inch long, which he said was the point of entrance. The foot and leg were white, but not swollen. I could not get positively any pulsation in either tibial artery nor were the superficial veins prominent. Auscultation over the swelling in the thigh did not give a typical aneurysmal bruit, nor was there any expansile pulsation. (I neglected to say that several days previous the swelling was aspirated and a little blood, neither distinctly arterial or venous, was obtained.)

A diagnosis of injury to the femoral vessels was made and operation advised. On the following day, October 25, 1916, at the Swedish Hospital, a free incision was made over Hunters Canal and a cavity holding about two quarts of clotted and fresh blood was entered. Notwithstanding control of the common femoral, there was considerable loss of blood before the hand could locate the point of bleeding and control it by digital pressure. It was found that both the femoral artery and vein had been completely severed in Hunters Canal. The nerve was fortunately intact. The hemorrhage had dissected up the tissues of the thigh on the posterior, internal and external aspects so that it was possible to pass the hand entirely around the femur. As much of the clotted blood was cleaned out as we could reach and each end of the isolated vessels was ligated with chromic gut, as it was not, in our judgment, possible to suture them owing to the wide retraction which had taken place. Time also was a factor, as the patient's condition was not any too good at the beginning of the operation, and the unavoidable loss of blood before we had the vessels under control did not help him any. While I was finishing the operation Dr. Murphy infused normal saline directly into the circulation. As we were reasonably certain of our technique, the wound was closed without drainage.

The whole limb was done up in a voluminous cotton dressing, which was not touched for about a week except to inspect the toes. From that time on his recovery has been rapid. His wound was healed by primary union and after the first day or two his toes were pink. At no time, even after he got up, on November 12th, was there any swelling of the foot or leg. He left the Hospital November 18th, and began to walk on December 20th. After being on his feet for awhile at the start he had a slight puffiness about the ankle, and complained of "pins and needles" in his great toe. On February 24th I considered his condition so good that I told him he might resume his work. This he did not do, however, as he was afraid to handle the tools and also said he could not sit steady longer than an hour or two without getting a cramp. I advised him to cut out one side of his stool, such as is done in Europe now to allow the workmen with stiff legs to sit on one side of the body and stand on the other. I have not seen him in some time and do not know whether he has done so or not. I would request that in examining this man's thigh you do not squeeze it, as this was done by a physician in January and the patient had considerable pain in the large toe for several days after.

Mobilization of Ankylosed Tuberculous Hip. X-ray. Patient.

Walter Truslow, M.D.

This girl came to me in February, 1916, when she was 13 years old, with a history of having had tuberculosis of the hip dating from the time that she was about fourteen months old, more or less cared for and more or less not cared for; and with the further story that there hadn't been much pain for about four years previously, but with this marked deformity—a deformity which, by careful estimation, I made out as about twenty degrees of flexion and adduction considerably more, way across the other side, at about thirty degrees. Her walking would be a characteristic one (illustrated by the doctor himself); and stiff at that place. We had an ankylosis to deal with. By trying my best to get the relative measurements (difficult when there is such a bad position) it seemed as though the actual shortening was hardly more than an inch to an inch and a half. It seemed to me that it would be wrong to doom that girl to such a condition for life. What should be done for her? It was too late to think of breaking it up under an anesthetic and attempting to get it back in position in that way. The simpler operative procedure is the Ganz subtrochanteric osteotomy. That replaces the bone to a more or less neutral position, but not at the joint proper and a stiff hip remains. The more I thought of it the more I thought that it would be worth while to go into that joint.

We got her into the Kings County Hospital and obtained a very good x-ray plate which shows the deformity and the amount of swelling there. The left side shows a considerable lessening of the size of the head and neck, and yet a reasonably good head of the femur. In February, 1916, she was operated upon under the usual anesthetic. A large U incision was made down the side of the upper thigh, the ends pointing upward. The flap was turned well back and an osteotomy of the greater trochanter was done, and the muscles were also turned up and back to get well into the joint proper. It is the most thorough way to get at the joint and clean it out. A certain amount of chiseling was done, using curved chisels, I separated the head of the bone, making practically an acetabulum and separating the head of the bone from it. It wasn't as difficult as I had anticipatd it would be: there was more freedom to it than I thought possible. The head was larger than the other side. It was, I think, a reasonable semisphere and a semispherical cavity that were left opposed to each other. Then the incision was continued further at the bottom of the U downward on the thigh about three inches. A piece, two inches square, of fascia lata was taken away, carried around over the head of the femur and sewed with strong kangaroo, some attempt being made at sewing it into the tissues, but it was largely a purse-string affair. No attempt was made to make a covering for the acetabulum. Then the trochanter and the muscles were sewed back again. Incidentally, I might say that the kangaroo tendon which was used in sewing the trochanter back to the femur caused an infection and this resulted in some degree of set back in the healing of the wound.

She was in the Kings County Hospital about three months. She was fortunate enough to get to the Bureau of Charities' Camp for Crippled Children last summer and had a splendid season out of doors. While in the hospital, beginning in about two weeks' time, she was given a good deal of passive motion. I must say that it hurt her quite a little bit, but we insisted on that about two or three times a week so as to avoid fixation. I have not seen her until today. I am more pleased with the result than I had anticipated. Her limp is due to the shortening of the limb. The shortening that was already present I don't think has been added to. She should have worn the raised shoe which was ordered for her. That limp is purely a shortening limp. There is a good deal of motion in the hip-joint, but we cannot get it quite up. Abduction was very great. The abduction was greater than the flexion deformity, although the flexion deformity was great.

I think if we can mobilize these old ankylosed joints we will be doing something that is really worth while for these cases. I was most anxious that we get back to the neutral position. Mobilization was an added factor of value.

Dr. Burr B. Mosher, in opening the discussion, said:

"I haven't much to say on this case except to congratulate the doctor on the very remarkable result which he has obtained. I certainly think that he should be very much pleased to get rid of that cross deformity and get the leg out as straight as it is, because I think those cross deformities are one of the most interfering deformities that we have about the hip, worse than flexion deformities, and, as I say, I just want to compliment the doctor on the result in this case.

"Last November I did a case of ankylosis in a grown person. The difficulty there was only flexion and by putting the patient in plaster we got a very good result, but the difficulty there was there was only flexion, and this is more than that and a very wonderful result, too."

Dr. J. Sherman Wight, in discussion, said:

"I would like to ask Dr. Truslow if he had a picture taken in that hip case after operation. That would show the difference."

By Dr. Walter Truslow: No, it got away from me, I am sorry to say."

By Dr. J. Sherman Wight: "You practically had no acetabulum in the first place. As I take it, the head of the bone is above the position of the acetabulum now, and that gives the position of the shortening.

"Did you have any trouble with the adductors in that case during the operation?"

By Dr. Walter Truslow: "No, not during the operation."

By Dr. J. Sherman Wight: "Where there is so much adduction as that, the adductors contract and must be incised. The result is a very satisfactory one and gives a considerable amplitude of motion there."

Dr. Walter Truslow, in closing the discussion, said:

"I just want to make myself a little clearer on the point brought up by Dr. Wight. I was greatly pleased with the comparative ease with which the operation was done. I anticipated more difficulty. On the operating table we got all the motion that I showed you, and it seemed to be without difficulty. The question of the adductors apparently didn't come up in this case."

Plastic Operation for Absence and Webbing of Fingers. X-ray. Patient.

Walter Truslow, M.D.

This boy presents himself with several congenital deformities—a boy twelve years old with these hands. I have taken these moulds of them (right and left hand). It was quite remarkable what that boy could do. He could lace his shoes; he could write using these two hands together. I will show the pictures, which I think are clearer. Examination of these pictures show that he had bones that were as you see there. On the right hand were the elements of two fingers and practically complete elements; and you wil lsee that a metacarpal bone and two phalanges would seem to indicate that that was the thumb; a metacarpal bone and three phalanges would indicate a large finger. I say compensatory in size because you see that it is relatively larger than any other finger would be in proportion to the thumb. This is the plaster mould. It is a condition of webbing and lack of fingers. The left hand presented this condition—again a thumb, with a metacarpal and two phalanges and a finger, with metacarpal, and three phalanges.

It seemed to me that if I could make a pair of pinchers of each of those hands it would be of value. That is what I attempted to do. The skin was tightly drawn. I got some infection from trying to draw the skin too tight, and I am not proud of that part of the work. The other one isn't healed yet and I cannot show that now.

I believe he will get back a good deal of power, and I believe the thumb power will return. He can extend the thumb, but cannot do much in the way of flexion.

Remarks on Condition of Coxa Vara in Same Patient: He also presents a hip which I haven't tackled yet. He has an apparently congenital hip. We could not get any history other than that he was born with this condition, for lack of a better name, I would call an intrauterine traumatic coxa vara. As far as the parents know, it has not occurred since birth. It seems to me that the proper thing to do for that is the Whitman operation. If one takes away a wedge at the trochanter (illustrating by drawing a diagram on the blackboard) and then brings the thigh up sidewise until one gets abduction and holds it thus until there is union, and then brings it down again, by degrees, if necessary, one may be able to get an anatomical cure. That is the operation ordinarily done in these cases of coxa vara, and I don't see why it wouldn't be applicable in this case.

Paper: "The Diagnosis of Sarcoma of the Stomach and Intestines: With Report of Cases."

William Linder, M.D.

Dr. William C. Woolsey, in opening the discussion, said:

"In ten years' service at Kings County Hospital with considerable morgue observation I recall no recognized case of sarcoma of the stomach or intestines.

"Dr. Linder presents us with a very unusual number of cases of sarcoma of the intestines. He mentions as important and significant diagnostic points, extreme, peculiar pallor in ay outhful patient with an eoplasm in the abdomen. With these meagre specific signs at our disposal it seems less than probable that any great number of correct preoperative diagnoses could be expected.

"As a matter of fact the value of a correct specific diagnosis is overshadowed by the very urgent necessity for early recognition of abdominal malignancy regardless of its nature. A diagnosis of abdominal or any other malignancy must be sought for before such malignancy has reached the stage of development where conclusive evidence is to be elicited.

"The cases of abdominal malignancy that do come to our service at K. C. H. are liable to be in the advanced stages of terminal pathology and frequently present the picture of chronic partial obstruction to the gut. The careful weighing of evidence pro and con over mechanical obstruction vs. functional stasis offers many interesting diagnostic problems for settlement and frequently leads us into delay in operating for relief of the obstruction.

"This series of cases presented by Dr. Linder is a relatively large one and though hopelessly unsatisfactory as far as treatment goes, they offer food for thought on the grave obligation we are under to acquire greater skill in recognizing the earliest signs of gut malignancy."

Dr. Joseph P. Murphy, in discussion, said:

"I can report one case of primary sarcoma of the intestine in which the diagnosis was made by accident and at autopsy. We possibly see these cases more frequently than they are reported, but do not recognize them when we see them.

"About ten years ago Dr. Alfred Stengel, of Philadelphia, translated Nothnagel's Encyclopedia of Practical Medicine, Diseases of the Stomach and Intestines, in which there is quite an extensive article on sarcoma of the intestine. He quotes voluminous statistics from the Hospital of Vienna and from Professor Kuntrat, who had charge of the pathological laboratory at that place. In speaking of the rarity of the condition he divides it, of course, into primary sarcoma of the intestine and secondary carcinoma. Secondary carcinoma of the intestine is not so relatively infrequent. In the small intestine Treves, for instance, mentions nine cases occurring as a sequelae of melanosarcoma. The point of diagnosis that I was able to make out from reading it was that in differentiating from carcinoma one seldom had essential obstruction to the bowel. As you know, the usual site of sarcoma is in the submucosa and connective tissue with the concomitant destruction of the mucosa; rarely is the serous coat, if ever, involved. In contradistinction to carcinomata of the intestine, which are usually annular in type (sarcoma of the intestine and such growths as lympho sarcoma and sarcoma together), you have a growth in the longitudinal direction.

"I will cite the case that I have in mind. I saw this patient last July. He was a laboring man who gave a history of having had pain in the abdomen for years. About a week before that he was stricken with sudden pain in the right appendicular region with nausea and vomiting and certainly localized tenderness. I thought I could feel a mass over the appendix, but it was difficult to definitely state so on account of the rigidity of the abdominal muscles. He was sent to the Coney Island Hospital, where I operated him under stovain.

On the table it was easy to make out a mass in the region of the appendix. When we opened the abdomen we discovered that we had an intussusception to deal with, of about eight inches of the ileum into the cecum. No attempt was made to break this up because the walls were well agglutinated. Lembert sutures were taken through the approximating coats of the small intestine and cecum. The appendix was removed, a longitudinal incision made into the gut and the intussuscipiens removed with the actual cautery, a few sutures of catgut beng taken to prevent hemorrhage and the possible slipping out of the bowel. He left the hospital in two weeks and said he hadn't felt better in years. I assumed that the digestive disturbance which he complained of was due to malformation—elongation of the mesentery or some mechanical condition which permitted of intussusception. The man came in to see me around Christmas time and he had a mass in the region of the previous operation about the size of a grape fruit. He was emaciated and looked as if he needed some further surgical help. The only diagnosis I made was that there was a mass there. What it was I did not know. We operated him again at the Coney Island Hospital and found that this mass was covered by omentum which was thinned out to about the thickness of heavy bond paper. That was removed from there and we found a mass of intestines and cecum agglutinated together. We couldn't break them up and did not try particularly hard to do so. They looked 'pied' in there. A Murphy buton was used to short circuit the bowel above the site of the inflammatory mass, sewing a portion of the ileum into the ascending colon. The man said he felt better after the operation, but he died in the hospital three months afterwards. He never passed the button. We cut down upon the site where the button was and located it. It was encysted and the button was removed and the portion surrounding the button was sent to Dr. Terry at the Kings County Hospital for pathological examination and, much to my surprise, it came back showing a round cell sarcoma. In that particular case I would never have made the diagnosis, I knew so little about the clinical aspect of sarcoma, were it not for the pathological report. Then I had occasion to look it up."

Dr. J. Sherman Wight, in discussion, said:

"Referring to the diagnosis of these cases, I would say that these cases are always interesting like cases that present symptoms in common with many other diseases and the distinctive symptoms of which are either not found or cannot be found; and that reminds me of a case which I saw recently and which I think will interest Dr. Linder. I do not know whether he or his brother saw it, but, in any event, two or three years ago it passed through the Jewish Hospital and an operation was performed. The man stated to me when I saw him that he had symptoms at that time which really are continued in the symptoms that he has today. He had abdominal cramps and abdominal pain. His appetite was fair, and these were about the only symptoms he spoke of. He has now, in addition to these, constipation and ribbon stools and considerable mucus from the bowel and he feels a continuous burning pain in the left lower quadrant of the abdomen. I had him plated in the office and the plates were very interesting and cleared up the condition. He showed a marked delay in emptying the large bowel and he showed a fusiform dilatation, as has been spoken of by Dr. Linder (though it was on the opposite side; *i. e.* below the constriction since he had been given a barium enema) with marked and distinct constriction of the sigmoid. That was the picture shown by the x-ray. That was repeated. I never take the first reading of a case; that is, the first plating. I plate and then have them plated again, and in this case it was repeated in the second set, so there could be no questioning the fact that there was a narrowing of the bowel, and I thought I could feel a tumor.

"Nothing has been done in the case, but those are the facts and those are the symptoms and it corresponds so closely to the description given of some of the cases that I believe it is a fairly early case, although it seems to have been a very slow growing tumor from the time Dr. Linder saw the case, if it was present then I doubt that it was in a condition that anybody could have made the diagnosis.

B as a morbid s[illegible] is characterized by an in[illegible] the needs of the circulation and the power of the heart to respond to them.

If this be so, then a sharp differentiation is to be made between this condition and lesions of the heart, and we perceive that a murmur alone, or a murmur accompanied by a thrill or an accentuation of another heart sound, or a disturbance of cardiac rhythm do not of themselves spell failure of compensation. Time was when cardiac conditions were looked at exclusively with an anatomic eye which appreciated only the gross and microscopic tissue lesions, and we talked glibly of endocarditis, valvular defects, myocardial changes, and pericarditis. Further light has been cast upon the subject, however, and now we appreciate that in practical consideration and treatment we must deal with the modified physiology of the altered anatomic structures.

In physiology we are concerned with the functions of the living organism and its parts. The function of the heart, in brief, is its propulsive action and this must follow certain definite laws which relate to the heart muscle and its power. The symptoms of cardiac failure, then, supervene whenever the heart muscle begins to show an inability to overcome the impediments set up by valvular lesions, plus arterial lesions, plus such lesions in other viscera as may complicate, plus the daily tax of work and digestion.

The heart muscle, like others in the body, has a capacity for overwork, and in the healthy individual develops an ability to respond to overexertion, characterized, however, by the breathlessness or dyspnea due to temporary exhaustion. There is a reserve force, however, that sees the individual through the usual emergency, and it is not until this reserve force, always immeasurable, is exhausted that the symptoms of true decompensation develop.

The physiologist, Gaskell, has demonstrated five special functions for cardiac muscle, and if we read carefully we can forsee the varied forms in which decompensation garbs itself. The functions, namely, are—the power to produce a stimulus, probably a cell-secretion, that will lead to contraction; excitability when stimulated; the conduction of stimulus from fiber to fiber at varying

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*Read before the Brooklyn Society of Internal Medicine, April 27, 1917.

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sufficient for [illegible] organ hit is usually the lung, and so dyspnea is early noted. Developed at first only on exertion, as of walking up grade or on climbing stairs, later it appears with the muscular effort of walking on the level, and eventually becomes continuous, even though the patient sit quietly. When the diaphragm is carried upwards by a large liver or abdominal ascites, or the lungs themselves are stiff and inelastic with the congestion of stasis, there is visible or discernible explanation for the dyspnea. We cannot be quite so certain of the cause of dyspnea under other circumstances. Various hypotheses have been advanced. Is it because the respiratory center fails to receive its full quota of oxygenated blood and metabolic poisons, as yet unknown, are retained in the blood stream to act as stimulants to that center, or does dyspnea resolve itself into a matter of early failure of the right heart? A third contention, rapidly winning advocates, is that dyspnea is to be accounted for on the basis of an acidosis; in truth, diminished alkalinity. This explains cyanosis without dyspnea, as seen in certain cases of congenital heart or mitral stenosis; for if dyspnea be due to poor oxygenation of the blood, how comes it that poorer oxygenation to the point of cyanosis can be developed and yet have the patient free from dyspnea? Probably the most substantial support of this idea is advanced by Leymann who at his will, through the introduction of very small quantities of acid salts or alkalies intravenously, has been able to produce increased respiratory rate, or apnea, respectively. The entire subject is most interesting and much experimental work is now under way in many laboratories. The development of passive congestion in the lung bases, as manifested by dulness on percussion and the presence of moist rales, explains the dyspnea in some cases. Hydrothorax is an ultimate possibility and is more frequent on the right side because of the venous arrangement.

The legs show at first soft puffiness, and later the hard shiny skin of long-continued edema. The shin and the posterior portion of the thigh exhibit the tendency first because of the poor blood supply in each of these regions. With the patient confined to bed, sometimes the greatest collection of subcutaneous transudate is the lower portion of the back. This is sometimes known as the "sacro-lumbar pillow."

The liver becomes swollen and tender; this is due to a relative tricuspid leak which develops as a rule late in the course of all forms of heart disease, occasioning back pressure on the vena cava. There is no liver pain, as such, due to the congestion alone. Gastric irritability through venous engorgement of the gastric mucosa, ascites and anasarca mark the further failing propulsive power of the heart. Constipation is the rule.

There is a sense of exhaustion on slight effort, a feeling of constriction in the chest and a "soreness" or hyperalgesia of the tissues under and near the left nipple. This "soreness" is curiously interesting and characterizes many cases. Fluttering of the heart and irregularity of its action are due to failure of the heart to supply proper nutrition to its own muscle and its nerve centers.

The sense of well-being is undoubtedly due to the briskness of the cerebral circulation, and so mental fatigue and poor memory are evidences of poor cerebral circulation, as are also lightheadedness, vertigo and syncope. The unconsciousness and epileptiform convulsions of the Stokes-Adams syndrome may be advanced in proof of this statement. The mental aberrations might form a special chapter; the suspicions of infidelity, etc. Cardiac pain is due to deficient blood supply of the heart muscle through the coronary arteries and may be of the true anginal character.

Cardiac asthma, Cheyne-Stokes respiration, hemorrhage from the lungs, and acute pulmonary edema are marked symptoms of decompensation. Cyanosis indicates poor respiratory exchange, the blood being insufficiently aerated. Strangely, cyanosis may be noted in cases that do not appear so seriously ill otherwise.

In this paper there is no consideration of physical signs, save the blood-pressure. Altered blood-pressure plays this part; that the gap between the systolic and diastolic (the pulse pressure) widens as the myocardium lets go, while with improvement there is a return towards normal. Not all will agree; some cases show the reverse. Beyond this I would not care to go, as so many factors have to do with the establishment of a patient's normal pressure. It is curious that the usual patient feels best with the blood-pressure which is his normal pressure and which represents the sum total of the forces which have made his life so individual.

The idea of treatment is to re-establish compensation, which we have seen is due to a failure of the reserve strength of the heart to overcome added burdens.

Several things occur to us at once: first, that the labors be diminished as much as possible in the hope that the cause of the overloading of the circulation may be determined and eliminated. And so we inquire about physical strain, mental worry, insomnia with its devilish string of sequelae, and such acute debilitating diseases as bronchitis and diarrhea. Secondly, the organization of a proper dietary regime. Thirdly, the establishment of physical rest, and fourthly, the institution of proper medicinal measures.

In fixing the logic of these steps, we must recall that we are not trying to cure the heart lesion but are endeavoring to restore the strength of the myocardium.

Ordinarily the patient in decompensation is in bed with head and shoulders elevated with a back rest, but occasionally a chair is more comfortable. Upon one thing I would insist, however, and that is that the patient be permitted to assume the *posture of comfort,* even to the Alpine climber's position of head on hands on the sick-table, which the patient sometimes desires. Some patients are restless and must get up and move about, or sit for awhile with feet on the floor before retiring to bed. Other things being equal, bed is our choice, because of the lessening of the edema of the lower extremities. Richard Cabot has noted the ingenious adaptation of the Morris chair to fit the needs of some, small pillows being pinned to the cushion to anticipate and prevent the sudden side-slipping of the head that wakes the exhausted patient with a jerk.

Morphia in doses of gr. 1/6-1/4 is now of great service, giving the patient his first sleep in probably many nights, renewing his courage with the optimism that succeeds slumber, and giving both body and mind a temporary rest from the struggles for existence. It furthermore is a cardiac stimulant and slows the heart. Inhalations of oxygen relieve the urgent demand for air and should be given constantly or intermittently. In the extreme cases with cyanosis, engorged veins and high systolic blood-pressure, venesection is indicated. When the situation is less critical, reliance may be placed upon Epsom Salts in doses of 1 oz. in a small amount of black coffee or water and given before breakfast, after the method of Hay, the English physician. Used in this manner, it has an extraordinary capacity for moving edema and transudates. The serous cavities may be tapped if the fluid accumulations are excessive.

At this point *depletion* may be furthered by the exhibition of the sodiosalicylat of theobromin (diuretin) or theocin, the latter being sometimes surprisingly more effective. The well-known Addison's or Niermeyer's pill of calomel, squills and digitalis, in hospital practice at least, has unfortunately shown a tendency to mercurial salivation; otherwise it has been excellent. Hot packing a weak myocardium is too dangerous for contemplation!

For *nourishment,* a diet of milk and fluids in small quantity should provide the patient with ample variety and calories. The patient for a few days should be spared the fatigue of chewing. Later light cereals and toast can be profitably added. Salt is to be kept at a minimum; the meals small and at three hour intervals. In those patients shockingly waterlogged, with enlarged liver and tricuspid regurgitation, we must institute the rigid Karell diet, which allows less than one-quarter of the total daily caloric requirement. For the first five to seven days 200 mil. of milk is given at 8, 12, 4 and 8; on the 8th, one soft boiled egg and two pieces of dry toast are added; the extra allowance is doubled on the 9th day. On the 10th day, rice and vegetables are added at noon, and this is followed for the remaining two days of the treatment. The diet is salt-free. Under its employment, withdrawal of fluid from the body should be facilitated. It is not a diet to apply carelessly by rule of thumb; we should have the reasonable assurance given by physical signs that the heart muscle has sufficient strength in reserve to withstand such rigidity in feeding.

With the fluid accumulations diminishing, the moment for introducing the cardiac remedy has arrived. *The drug of drugs is* *digitalis* and the method of administration preferred is the subcutaneous injection.

But what of digitalis? Let us see. Disregarding the American grown plant which promises so much at present (the first reports state that it is twice the usual strength), we may say that the typical digitalis is *Pulvis Digitalis,* made from the selected English leaves of the second year's growth, picked in the flowering season and dried at low temperature when fresh in order that the potent glucosides may be retained unimpaired. Two percent only of stems, flowers and foreign matter is permitted. The excellent preparation of Stafford Allen and Sons, Ltd., grown at Long Melford, may be chosen as typical. This particular substance is further standardized. If the minimum dose for a 100 gm. frog be considered as established at 1.2 gm. of the dried leaf, the standard of therapeutic activity adopted at this laboratory is 1.4 gm. (The official tincture is likewise standardized by biologic assay, the minimum lethal dose not to exceed .006 mil. (gr. 1/10) per each gm. of body weight of the frog, the .006 mil, of tincture thus being equivalent to .000,000,5 gm. of ouabain, the very active glucosid of the African arrow poison. Reed and Vanderkleed substitute the toxic dose in a 240 gm. guinea-pig for the toxic dose in the frog, standardizing the strength at that amount which will kill the test animal in twenty-four hours, checking up on this finding by quantitative chemical estimation of the crystalizable digitoxin). The Hartz mountain digitalis from Germany is equally reliable.

Digitalis slows the pulse, through heart block and vagus inhibition, increases the size of the pulse wave, increases the force of the systoles and is diuretic. The further action of increasing blood-pressure does not appear operable in those cases of decompensation with high blood-pressure, so may be dismissed from consideration in this connection. These physiologic effects result from the stimulation of the ventricular musclature, the prolongation of the diastole, the stimulation of the vagus and the contraction of the walls of the arteries. With this in mind, how true the words of Osler,—'Broken compensation is the signal for digitalis!"

Clinicians have long maintained that digitalis has a specific effect upon the nutrition of the heart muscle, but substantial proof has been unavailable until the past two years, in which time it has been established that changes are produced in the "T" or second ventricular wave in the electrocardiographic tracings. This wave is at first lower, then flat, then inverted; and the changes persist for from seven to ten days; on some occasions as long as twenty-one days. Of equal or even more importance is the lately established utility of digitalis in the presence of fever. For this we are indebted to Cohn, Jamieson, Gunn, Sollman and others.

The various preparations will bear both reference and study:

The Digipuratum of Knoll, imported by Merck & Co., in ampoules for intramuscular or intravenous use, represents the whole drug and is a most reliable proprietary preparation. It is faintly alkaline and isotonic with the body fluids. One gram equals one gram of Folia Digitalis, .1 gm. being equivalent in each case to 8 frog units. It is supplied also in tablet form, gr. 1 1/2 tablets equalling the 1 mil. ampoule. In terms of the solution, 4 ampoules represent the maximum daily dose.

Digalen, a Hoffman-La Roche preparation of the most active glucoside in the powdered leaf, Cloetta's soluble amorphous digitoxin, in a weak glycerin solution, is very efficient. One milliliter represents 2 1/4 grains of fresh physiologically standardized leaves. In doses of 10 minims every three hours this product is rarely disappointing. It is particularly valuable intramuscularly.

When the response is good, a *fat-free tincture,* free from the fixed volatile oils of the usual tincture, and physiologically tested and standardized, in doses of 5 to 15 minims will be found sufficient. One can safely shift to this preparation from the more expensive ones already named. With 30 minim doses, it is possible to digitalize within 18 to 24 hours. Intravenously, digitalis should produce its effect in one hour or less. Intramuscularly, a suitable preparation should result in recognizable digitalization in about two hours.

The Infusion of Digitalis is a valuable preparation, but in using it we are frankly at the mercy of the dispensing chemist. It is almost no exaggeration to state that no two druggists prepare it of unvarying strength, and so in each application therapeutically it is much more of a remedy tentatively advanced than the preparations already named. When a reliable pharmacist places before you daily a fresh infusion, made always according to the same formula, I can honestly advise you to patronize him, for his preparation is dependable, and you must in digitalis therapy know the strength and carrying power of your weapons. The new 9th Edition U. S. P., in effect last September, eliminates the 10% of alcohol which was previously used in the preparation of the infusion.

The Extract, Fluid Extract and the French, German and Merck varieties of *Digitalin* (of which Merck's is the purest chemically) have their supporters. Personally I never use any of them. The German Digitalin is made from the seeds which contain digitoxin and is variable in strength in consequence. The crystalline Digitalin of C. A. Nativelle, so popular in France, is standardized and dependable. It is marketed in granules of .1 mgm. strength and is really crystalline digitoxin of the Schmiedeberg or Killiani method of extraction.

Buerger's *Digitalysatum,* a 12% alcoholic solution of the leaves rendered free of oils, fats and resins by passage through a dialyzing membrane, is reliable; 1 gm. equals 2 gm. of Pulvis Digitalis.

Whichever preparation is used, it should be exhibited in large enough doses to obtain physiologic results. These differ in different patients and are nausea and vomiting, headache with frontal fulness, bradycardia or pulsus alternans. Less often extrasystoles may develop. At this point, the medication should be broken off for one or two days, and resumed in advisedly one-half the former dosage. Auricular fibrillation (total arrhythmia) may appear, but it is not inimical. The Osler method of using the tincture is to give the remedy in courses of 8 doses of 15 minims each every four hours, repeating the course if the case requires it. Other clinicians give large doses until the pulse reaches 80, then reducing the dose to smaller proportions; while still others administer the drug in moderate doses, 5 days on, 5 days off.

It is, in my mind, entirely a matter of the patient and his needs. I subscribe to the second mentioned method, but believe that the treatment should always be individualized. Quite frequently the first digitalis must be given intramuscularly.

The irregularities of the heart beat arising from the use of digitalis have been thoroughly considered by W. M. Barton in the American Journal of The Medical Sciences (1915, Sept.). He advised Caffein as a remedy for the arrhythmias, advancing the argument that the caffein increases the irritability of the auriculo-ventricular conduction system and thus overcomes the depression of the digitalis. This seems to be a valuable suggestion and worth putting into practice. If we think vagus stimulation is a factor, Atropin which depresses the vagus should be used in combination with the digitalis.

There are other remedies than digitalis.

Strophanthus by the mouth is slower of absorption than digitalis, and is of such nauseous taste and smell that patients complain bitterly of it. In children it seems of more value. I rarely use it in adults save in the later days of convalescence when I am fond of combining it in small doses with similarly small doses of digitalis and nux vomica. One very awkward untoward effect is its tendency to produce diarrhea. *Strophanthin* intravenously is another story. I refer to Boehringer's ampoules containing each gr. 1/67 of strophanthin. They are a *sheet anchor in times of trouble!* The results in half an hour are wonderful, especially in cases with the very rapid pulse of auricular fibrillation. The same preparation may be given deep in the gluteal or thigh muscles with scarcely less extraordinary result.

Strychnin acts by toning up the vasomotor system and energizes the heart muscle through its stimulation of the intrinsic ganglia. It is splendidly synergistic to digitalis.

Camphor is a rapid diffusible stimulant of fixed value in the minds of many of us, but it is well to remember that it is not of the digitalis group and we must not expect it to show the full foxglove action.

Caffein and *Atropin* deserve to be mentioned again. *Ammonia* is an active stimulant that does not in the end depress as, for instance, alcohol does.

In convalescence, Iron, Arsenic and Calcium are drugs of great value, through improving the general body nutrition and incidentally that of the heart muscle.

In the orderly conduct of a case of decompensation, we can usually follow the plan of depleting the individual before digitalizing him, but there are urgent and extreme instances in which a radical departure from this scheme must be had. These are the very severe cases rushed to the hospital at almost the last minute, or the cases in apparently terminal decompensation. In these cases, with acupuncture and tapping as mechanical aids, the patients can be placed at once upon thorough digitalis medication.

Prognosis resolves intself into a consideration of the immediate and ultimate outlook. Without wishing to be axiomatic, I might say that *the immediate prognosis is largely a matter of the activities of the physician and the ultimate prognosis largely a matter of the activities of the patient.* If there is one thing that is essential and necessary, it is that the patient must be amenable to reason. He must be given a new point of view. Patiently he must be taught to revise his ideas of life and conduct, and he must appreciate and accept the instruction which issues from the physician. Not every patient finds this easy and so we must anticipate his disappointments and backslidings. For he must possibly forswear certain occupations and certain recreations; he must learn self-control and the ability to minimize worry and trouble. Above petty annoyances he must learn to lift himself. In other words, he must essay a re-creation. If he keeps his tasks within the bounds of safety, and develops the immunity to emotional stress, it is a delightful surprise to note how well he does and how the years of fairly good health and happiness pass without untoward developments.

The long walks, the fatiguing sports, the heavy dining, the mental excitement and the moments of irrascibility and temper must be shelved, and in their stead a calm, placid, rational life developed. The heart muscle thrives on this kind of existence, and is most apt to maintain the compensation which has been restored. Let us be specific and rule out running for cars, racing upstairs, baseball, football, bicycling, singles in tennis, boat racing—in fact any strenuous occupation in athletics. Straining at stool and the lifting of heavy weights are equally bad. *Gradually increasing exercise, however, is one of the most important factors in the strengthening of the heart muscle* and the re-establishment of cardiac vigor. It must always be under careful, trained supervision. Alcohol is interdicted, except in the aged. The solace of tobacco I grant unless digestion or the nerves are disturbed. The rule is the key to many things: moderation!

The vocation to be permitted must be chosen in every individual case. If we grant this, should we not go back a step further and select definite occupations for those children whose cardiac valves have sustained grave injury from the visitations of the streptococcus? Would it not be better to do so than to permit them to go into vocations from which they must retire at the first sign of cardiac breakdown? Of what value is accumulated evidence if we do not apply it to the concrete case? Such recommendations need not come from school physicians, but from the family medical advisor who is in touch with numerous instances all the time. Those patients who accept membership in the cardiac classes at the dispensaries are naturally assured of the proper advice.

The average cardiac patient is prone to consider himself well upon the establishment of circulatory balance, and here lies the difficulty of having him acknowledge that *restoration of compensation and restoration of health are not identical.* Medicine he will take; against rest he protests. It is the wise patient who knows his own heart, and so we must teach and re-teach these individuals who take their "drops" but who hasten back to work and worry without adequate rest. The goad of financial necessity drives back some who would otherwise be agreeable to our plan; for these there should be sufficient provision made by the state. Distinctly this is not charity but proper paternalism. What sort of institution—hospital, shop, farm?—time and experience will eventually determine!

Every attention must be given to insure the maintainence of the restored compensation. And so we must eliminate all possible sources of focal infection and further valvular and myocardial damage, the teeth and gums and the tonsils receiving especial consideration. No pyorrhea can be permitted and no diseased tonsil left in situ! Ears, sinuses, Fallopian tubes, biliary tract, and prostate gland are to be thoroughly investigated. Syphilis must be steadfastly attacked with mercury, salvarsan and the iodides.

I spoke of heavy dining as something to be discarded. In its place there should be simple well-balanced meals, with the evening meal the lightest of the three, and taken several hours before retiring. An overloaded stomach makes for dilatation of the heart and serious "acute indigestion" with pulmonary edema.

Sexual proclivities must be modified according to the individual. In each case the most careful inquiry must be made as to incidental dyspnea, vertigo, palpitation, cough and precordial pain, for upon your advice, and its acceptance, may rest the comfort—indeed, the very life of your patient.

These matters have all dwelt with the ultimate prognosis and care of the patient. There remains a consideration of *the immediate prognosis.* In these remarks I have meant particularly the heart damaged by the streptococcus. We can agree at once that the outlook in the individual case depends upon many factors. Enumerated they are: the number of valves affected, the degree of stenosis or insufficiency, the amount of ventricular dilatation, the presence of coronary disease, the age of the patient, his occupation and his economic state, the age at which he had his original endocardial damage, the number of previous attacks of decompensation, the degree of decompensation, and the duration of symptoms; all these in addition to the facts elicited concerning the heart muscle, by which I mean the rate and quality of the pulse rate, the systolic blood-pressure, the pulse pressure and estimate of cardiac load,.the rhythm of the heart action, the amount of cardiac hypertrophy, and most important, the quality of the heart sounds.

Response to treatment is the largest single factor. If rest and digitalization fail, the outlook is bad, to say the least.

Pregnancy is a special problem. Every case is an individual matter requiring individual consideration. The childless wife is not necessarily unhappy, but she must fill the void with work, play, philosophy or some one else's baby. If a cardiac case becomes pregnant, you are faced with the unpleasant duty of opposing the normal desire of the woman for maternity or the equally unpleasant duty of conducting her through a pregnancy the dangers of which may at any time assume terrifying proportions. In any given case all the factors upon which prognosis is based must be considered, and a judgment cautiously reached. Perhaps the most disconcerting cases are those of mitral stenosis, but even in this group pregnancy can proceed to a happy conclusion.

So far I have had in mind only old streptococcus hearts. In certain cases of failing heart, there are special etiologic factors:

When Syphilis is the factor, we can expect aortitis, aortic regurgitation, aneurism and coronary disease. The prognosis is not so good, chiefly because the lesion is not an arrested one. The spirocheta dies hard, and once installed in the cardiac or aortal tissue, continues to exert his evil influence. Continued degeneration of normal cells and the steady growth of luetic scar tissue; these are the slowly progressive changes, and when applied to the important heart and aortal structures, one can forsee the tendencies which are so well recognized clinically.

The arteriosclerotic heart carries with it the same threat of advancing change in the coronary arteries. A large heart working hard against increased peripheral resistance; attacks of asthma and anginal pains; vertigo, vascular crises; thrombosis and embolism accidents are frequent. Here again the life of the patient must be subjected to the most careful supervision. Our hope is that it will be gracefully accepted. As this group of patients is in middle or advanced life, there are special problems in connection with this control. Therapeutically an attempt is made to lessen the rapidity of the advance of the arteriosclerosis through the utilization of the usual resources of diet, gastrointestinal hygiene, iodides and lessened work. In this group, as in the others, there comes a time when digitalis must be thought of.

The nephritic heart is a large heart which grows feeble as the months pass. It is typical to observe it in a young adult with nocturia, albuminuria, low phthalein excretion, anemia, retinal changes, and nitrogen retention bordering on uremia. The treatment is not, as one would anticipate, the treatment of the nephritis exclusively. We must look a little further and consider measures to strengthen the heart. Digitalis in tonic dosage, massage if edema is not present, and resistance exercises; coupled with a diet which is strengthening at the same time that it escapes irritating the renal epithelium.

The fatty heart may be of two types pathologically: fatty degeneration or fatty infiltration; probably more frequently of a mixed type. Clinically it is seen only in those individuals with whom Nature has been over kind, and the presenting symptoms are those of a weak myocardium. The indicated step, therefore, is to strengthen the heart by tonics and graduated exercise, and not, as Barker emphasizes, diet the patient so sparingly as to further weaken the heart muscle. The excessive diet should be cut down, but no rigid dieting attempted. In the event that the cardiac muscle continues insufficient, the patient must be put to bed, fat and all, just as though he were a poor anemic body to whom the gods had not been so generous. In other words, as we have seen in the other conditions, the essential thing is the competency of the myocardium.

The goitre heart is a large, weak, overacting heart, which races along wearing itself and its owner out. Tumultuous in its action, with a pulse rate that varies with the patient's changing emotions, barometic as to fear and pleasure, it eventually produces dyspnea and the other symptoms of myocardial weakness. Frequently it so annoys the patient that she seeks relief from the tachycardia without associating it with the other symptoms of loss of weight, sweating and nervousness. From a medical standpoint, it is an integral part of the general clinical picture and not primarily a heart of pure cardiac interest. The treatment is that of the underlying thyrotoxicosis. We may essay control by the medical treatment of rest, overfeeding, digitalis, belladonna and quinin, but no case should be permitted to advance without prompt consideration of surgical measures.

DRUG HABITUATION AND DRUG PSYCHOSES.

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DURING the past few years, much attention has been paid to this serious economical problem by physicians, legislators and the police. The use of habit-forming drugs has increased to such an alarming extent of late years that various States and the Federal Government have passed laws seeking to control this traffic, which has threatened to disable, if not exterminate, many of our citizens, often in the stages of early manhood. Particularly during these times of stress, should the victims of these drugs be singled out and given proper treatment in order that they may be able to assume their proper responsibilities toward their country and toward life in general. The general symptoms of drug habituation are quite well-known, but a brief review of them will serve to fix them better in your minds.

Morphine, being the oldest and at one time the most commonly used drug, deserves first place in our description. It affects the nervous centers directly. As animal experimentation has shown, it leads first to an increase, then to a decrease of reflex excitability; it causes pupillary changes (miosis). Larger doses paralyze the respiratory center causing a lowering of the blood pressure and retardation of the pulse, probably through paralysis of the accelerators. Furthermore it diminishes the secretion of the mucous membrane and glands, inhibits the peristaltic motions and disturbs digestion. This latter is probably due to the elimination of the poison in the stomach. Part of the morphine unchanged leaves the body in the urine and part is changed into oxido-morphine, a substance to which the symptoms of abstinence are traced. By occasional experiments on human beings, it has been shown that in small doses at first, there is an excitement of the imagination, of the intra-psychical activity with diminished reaction to external impressions, decrease in pain sensation and difficulty in the transformation of concepts into motor actions.

The symptoms of acute poison are increasing coma, narrowing of the pupils, pallor and cyanosis of the skin, slowing of the pulse and respiration and reduction of bodily temperature, sometimes epileptiform twitchings are present, and either death supervenes or after a deep sleep and heroic treatment the patient recovers. The symptoms of intoxication appear after the use of the drug for varying periods,—weeks, months or years. In the beginning, a feeling of general euphoria is usually present. Digestive disturbances are prominent from the effect of the drug on the digestive tract. There is obstinate constipation, loss of appetite, a feeling of fullness in the stomach, nausea, vomiting and a special aversion to meat. The mucous membrane of the mouth is dry, the skin becomes pale and dry, and there is a diminution of sweat secretion. Occasionally, there are trophic disturbances present in the hair, nails and sometimes teeth. There is usually also pres-

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From the Psychopathic Ward, Kings County Hospital. Delivered at a lecture to Medical Officers, U. S. N., July, 1917.

ent some disturbance in the sexual functions; impotence, amenorrhea, etc. Miosis is found very early with sluggish, inadequate reaction of the pupils to light, accommodation paresis and insufficiency of the internal muscles at times. General muscular weakness, tremor, disturbances in coordination and ataxia are rare.

The initial mental symptoms are a slightly exalted, varied mood with stimulation of intellectual power but inhibition to activity. Later, the intellectual capacity is usually farly well retained, but the power of decision and the emotional life suffer; by means of fresh injections, the tendency, finally becoming a habit of ignoring the unpleasant side of life, becomes manifest. With the absence of normal fluctuations in feeling and the slavish dependence on the drug, the important interests in life are lost. The victims become indolent and indifferent to the troubles and tribulations of relatives and friends. They become deceitful and often lying, particularly with reference to their habit. Often under the influence of abstinent symptoms, there occur offenses against the penal code. With continued intensive use, the patients show a marked physical deterioration which renders them less resistant to intercurrent infections. With rapid increase of the dosage occurring in the use of this drug, mental manifestations may make their appearance. I shall describe this with the deliria, due to drugs, later on in this paper.

Abstinent symptoms are quite important. Within a few hours after the last dose; a general restlessness supervenes, there is frequently yawning, sneezing, coughing, retching and vomiting. With this, there is now present a profuse secretion of the mucous membrane and the glands. With increased peristalsis, there is a profuse watery diarrhoea; the skin becomes pallid and cyanotic; the pulse rate rises and often the pulse becomes dicrotic. In severe cases, the pulse becomes irregular and imperceptible; the pupils become widely dilated, irregular, and react poorly to light and accommodation. Pains of all sorts develop of a neuralgic and paresthetic nature, and the gait also becomes tottering and ataxic.

Occasionally great restlessness develops and the patient demands morphine constantly. Usually, there is total sleeplessness, but some patients lie totally apathetic, exhausted, and no longer show reaction to anything. Finally, delirium may develop.

Heroin, being a derivative of morphine and being undoubtedly the most common form of drug habituation at the present time, deserves special consideration. Heroin, or diacetyl-morphine, differs from morphine to a greater degree than codeine and dionin. Heroin and its action in lessening cough has been known for many years, but it was not used therapeutically until Dreser investigated its action in 1898 and found that it decreased the reflex excitability of the respiratory center toward painful stimuli, such as those which induce cough, more than it does toward carbon-dioxide, the normal stimulant of the center. He also found that it slowed the rate of respiration while the depth and force of the individual respirations were increased, and he suggested that the increased force of the respiration would be of value in the treatment of bronchitis in which disease the air-passages are narrowed. Dreser experimented on rabbits, but it has been shown that his results do not apply to the use of heroin on man. Cushny has recently shown that heroin influences the respiration exactly as morphine does; that is, the respiratory center is depressed. It therefore has no evident advantage over the older drug in the treatment of cough. Heroin is much more toxic than morphine and must be used in correspondingly smaller doses, the average dose being one-twentieth of a grain. It gives rise to the habit quite as readily as morphine does and the habit is as difficult to break and fully as injurious. In proportion to its activity on the respiratory center, it is said that it is less actively narcotic and also less actively analgesic than morphine. Its use therefore should be limited to the relief of cough, and, if used, should not be long continued for fear of inducing the habit.

The patients whom we have received in the Drug Ward of the Kings County Hospital are usually undersized and poorly developed physically. They have a rather pale appearance, but the physical examination has failed to reveal any gross physical disorders except in a few patients who suffered from pulmonary tuberculosis. The patients are usually underweight. I have noticed no characteristic neurological findings except a dilation of the pupils, which always have been found to react promptly to light. Employers and relatives, who seemed to be dependable in their statements, claimed to have noticed that the patients usually slept longer in the morning than was their usual custom, appeared to be without ambition at their work and took less interest in life. It has also occurred frequently that after a time the patients had to give up their positions because of their inability to do satisfactory work. While many of them worked to within a few weeks of their entrance into the hospital, there were many others who had not done any work for several months and sometimes for years. Friends also reported that when the patients were without the drug, they were irritable, restless and sleepless. The symptomatology of the heroin addict is interesting. Many patients, who apply for voluntary admission, take a farewell dose, and are found on examination to be dull and sleepy. They yawn a great deal and it is almost impossible for them to keep awake during examination. Others who have not had the opportunity of obtaining the drug for a few days appear restless and nervous. After being in the ward a short time, all of them suffer from vomiting and complain of abdominal cramps and a general feeling of weakness. After a time, cramps in the legs, pains in the joints, and twitchings in their legs make their appearance. These symptoms are attended by sleeplessness and general restlessness, and often the patients are noisy, complaining constantly, asking for the drug. If the patients have not taken the drug for a week or more before coming to the ward, they show practically no symptoms except possibly sleeplessness. The temperature, pulse and respiration are normal in most of the cases, but in one or two instances where the patients suffered severely from symptoms of withdrawal, the temperature was about 101, the pulse elevated and somewhat weak. The respirations did not seem to be affected in these cases, and except for the drowsiness, above noted, there were no mental symptoms present. The patients uniformly describe the first effects of the drug as being nausea and vomiting followed by somnolence. This occurs after taking the drug for the first three or four times. When asked why they persisted in its use, in view of this result, the patients said that they had been assured by those who initiated them into the habit that this effect would not last and that all they needed was another dose of the drug to overcome this reaction. As they persisted in its use the effect became almost entirely one of somnolence, and larger doses were needed to produce the desired effect. Without the drug, they became restless, uneasy, unable to sleep, felt weak and suffered from cramps in the legs and abdomen. If the drugs were taken at this time ,the patients felt much better; the cramps disappeared. According to some, a feeling of well-being arose but none of them described any attendant excitement or stimulation. They merely seem to feel as well as they would have felt in their ordinary health before taking the drug. At this stage, no somnolence was produced unless an extra large dose of the drug were taken. This effect of well-being lasted for three or four hours. Even when somnolence was produced, the patients claim to have been able to ward off sleep by walking about but if they sat down quietly they felt heavy and began to doze.

As to the dose of the drug, most patients start with what is known as a "package." This is supposed to represent three or four grains of pure heroin mixed with milk sugar, and is sold to them by the dealer in the lower half of an ordinary pay envelope. As the use of the durg is continued, they are no longer satisfied with the use of one package daily and soon begin to use two or three daily; finally pure heroin is taken to produce the desired effect. The dose of this varies from eight to twenty grains daily. In some instances, an eighth of an ounce a week; in others, an eighth of an ounce every three days was used. In practically all of the cases, the drug was taken by snuffing it from a piece of paper made into what was known as a "quill"; others took it from the blade of a knife while at times it was taken from the back of the hand. Of late, I have found that many of the patients are taking it hypodermically either because they have been morphine addicts at one time or else because they regard this method as more scientific For some reason (not explained) the drug is usually taken into the same nostril and the patients claim that the sense of smell becomes less acute in the nostril in which they take the drug than in the other nostril. Examination revealed no case who showed permanent impairment of smell but some of the nostrils looked as if they had been the seat of inflammation. Some of the patients said that when first taking the drug they sneezed a good deal for a time but this soon wore off. As to the length of time during which the drug was taken, the statements varied; in one case, it had been used for a period of six years intermittently; in another four years. The average duration appears to be about one year. After admission, these patients often use numerous subterfuges in order to secure the drug. Frequently, they will throw themselves on the floor and complain of severe cramps and pains all over the body, but it is usually clear, after observation of the patient, that he is shamming, and when the drug is not forthcoming he recovers completely.

I have recently seen it stated in an article on Heroin Addiction that it has not been found that these cases have jail records. This has not been our experience here. Many of the patients give a history, and this has been corroborated, of having been in reformatories for petit larceny, picking pockets, etc., and many have also been in the workhouse, having been committed there on a charge of vagrancy. It is impossible to give the exact figures in regard to this because of the inaccuracy of the statements of the patients and their relatives. In many instances, the patients are members of gangs who congregate on street corners, particularly at night, making insulting remarks to people who pass. The histories, as obtained from the patients and their relatives, show that in practically every case the drug had been tried by one of the members of the gang who then induced the other members to try it, so that on one or two occasions we have had all the members of one gang here at the same time with consequent difficulty in handling them. There appears to be no well-defined reason for acquiring the habit, other than that given above, and most patients give the rather simple explanation that they "wanted to see how it felt."

Many of these habitues, the police tell me, live with prostitutes and upon their incomes. I am told by all of the patients, however, that the drug takes away all sexual desire. In most of the cases we found a characteristic history of a bad record in school, of lack of promotion. After leaving school, many patients were unsuccessful, held unimportant positions and changed frequently because of dissatisfaction either on the part of the employers or of themselves. I performed a total number of fifty Binet tests on as many cases, not specially selected, but taken simply as they came, and these tests were done in all cases after they had fully recovered from the effects of the drug. I did not use the Binet tests above the age level of twelve years because I consider them somewhat unsatisfactory and unsettled. Of the fifty cases, seven showed an age level of twelve years, that is, they passed all the tests up to the twelve years level; nineteen cases showed an age level of eleven years; two an age level of ten and one-half years; fourteen an age level of ten years; seven an age level of nine years, and one case showed an age level of seven years; so that we see that there is a defect in the majority of these cases; either they are well-marked cases of mental deficiency or else they are of the Moron type, that is a higher level of mental deficiency but yet wholly unable to cope with the intricacies of life and to adjust themselves to the demands which their position in life makes upon them.

While many of these cases are convicted of crime before they have the habit, others I believe do not commit crime as a result of the drug habit but rather because they are in need of money at the time and steal in order to secure money for the drug. In no instance was I able to find that any crime had resulted directly from the use of the drug; that is, while the patients were under the influence of it. An Inspector of Police, who has been very much interested in this type of individuals, and in rounding up the cases, agreed that such was his opinion. However, the statement is made by the patients that under the influence of the drug they possess more courage than when they are without it.

It has been our experience here that within a short time after the treatment was finished, the patients soon returned to their old haunts and within a short time were again using the drug. This would seem to show that many of these cases are easily influenced, and as many of them are below normal at best, their will-power is not very strong. Besides they seem to be guided by a sort of "herd instinct," in that they have been accustomed to do what the gang has always done and again do it in this instance. This is further shown by the fact that when they steal or commit any other crime it is done in groups and they are generally braver in the company of the gang than when alone.

The next habit-forming drug which presents itself for consideration is cocaine. Cocaine, even in small doses, exerts a sedative influence upon the nervous system, particularly upon its sensory elements, and an influence at first stimulating, later paralyzing, on the motor apparatus. It causes increase in respiration, contraction of the blood vessels, heightens the blood pressure, and in large doses, has a paralyzing effect. In man, after small doses, there are exhibited besides local anesthetic effects, a peculiar euphoria, an increase in the activity of the mind. Large toxic doses lead to intoxication-like conditions, with depression, inhibition of thought, difficulty in speech, also to hallucinatory deliria and collapse; conditions, which after a long sleep, lead to recovery, or eventually amidst convulsions to death. The effect varies with the individual, also with the concentration of the solution. Occasionally in predisposed or physically-weakened individuals, protracted conditions of nervous weakness and terror, characteristic of an acute intoxication, follow one excessive dose.

Chronic cocainism rarely results from continuous external use of cocaine as a local anaesthetic for the mucous membrane of the nose, pharynx, etc. In most cases it develops on the basis of morphinism, from an attempt to withdraw morphine by the substitution of cocaine, which, in a certain respect, works in opposition to it. The result is always that cocoine continues to be injected in addition to the morphine, and that too in considerable doses. Cocaine exhibits a number of very unpleasant peculiarities. Its effect quickly passes away, and the patient is therefore forcer to take larger and larger doses. Cases in which five to eight grains were injected are not rare.

Even after a short time, there is loss of appetite, disturbances in nutrition, emaciation, pallor, trophic changes in the skin and nails and edema. There appear also flaccidity of the vessels, acceleration, rarely retardation of the pulse and dyspnoea. The sexual functions are impaired. The pupils are usually dilated, but react very well. The musculature becomes flaccid and weak, the gait tottering and infirm. The patients display trembling in the hands, in the musculature of the face, hesitating uncertain speech, frequently cramps in the calves; in some cases there are pronounced epileptic attacks.

In the mental sphere, a decrease in intellectual capacity is very soon noticed; absent-mindedness, forgetfulness, a very characteristic circumlocution in speaking and writing. To these are added restlessness, excitement and conditions of fear; sleep is always insufficient. The lowering of the moral qualities and of the higher feelings is striking. The patients lose interest in their vocation and family and become untruthful and careless in appearance and behavior. They are irritable, discontented, querulous and suspicious. They often complain of peculair paraethesias.

Pronounced psychoses of the nature of acute hallucinatory deliria are common. This will be taken up later in connection with the drug deliria. Often, however, there remains a more or less constant mental deficiency which is characterized by ideas of persecution and ideas of reference. They are frequently taken to task for their cocainism. The hallucinations are of sexual content and they see obscene pictures.

The long continued absorption of bromine leads to intoxication usually only when used in the form of bromide of sodium, potassium, lithium or ammonia; hardly ever when taken in organic combination with fats. The bromide is accumulated in considerable quantities in the organism, crowds out the chlorine from its compounds in the fluids of the tissues and the individual organs, and leads to disturbances mainly on the part of the skin, the general nutrition and the nervous system, which one should know when using it therapeutically.

Usually very soon, but the time varies with the individual, there appear exanthemata, usually in the characteristic form of bromide acne, pustules without an area of inflammation, the purulent content of which contains bromide occasionally small abscesses with spongy, indolent granulations. Catarrh of the mucous membranes of the respiratory and alimentary tracts, loss of appetite, coughing, expectoration, lowering of the nutritive condition and cachexia are frequent.

Bromine causes a considerable lowering of the excitability of the central nervous system, fatigue, muscular weakness, lowering of the sensibility, but also occasionally pains in the limbs, pressure in the head, forehead and temples, weakening of the reflexes in the skin and mucous membranes. The patellar tendon reflexes also may disappear altogether. There appear furthermore disturbances in swallowing, mumbling speech, tottering gait and loss of sexual desire. The mental processes also are impaired, understanding, reproduction, association, and judgment. With continued use, there may appear disturbances in the activity of the heart; small, frequent, irregular pulse; a constant desire for sleep and coma, and through disturbance of expectoration even aspiration pneumonia and death.

Bromine may be quickly removed from the body and easily withdrawn without abstinent symptoms.

The psychoses induced by the habit-forming drugs produce deliria, which are similar to delirium tremens as produced by alcohol in many respects. According to Bonhoeffer, in eighty to ninety per cent of the alcoholic deliria, the patient moves about a great deal and is constantly occupied; his face is congested, his expression anxious and he shows marked fear. There is a very pronounced tremor and profuse perspiration; the gait may be somewhat uncertain and there is ataxia of speech. Bonhoeffer also occasionally mentioned eye muscle disorders, which are, however, very slight, and retrospectively the patient may speak of double vision. The patients do not appear dull, and even at the height of the delirium they can be demonstrated to students and the impression made on them is not markedly different from the normal, but the examiner finds that it takes some effort to hold the patient's attention. On a more careful examination, it is possible at any time to force a patient to a maximum degree of attention which does not differ from the normal. A conversation with the patient also tends to raise his atention to a certain level, but when left to himself, there is a constant tendency for the attention to reach a lower level, at which time the normal train of thought ceases and the arising ideas show a marked tendency to become projected, as it were, as hallucinations. During an examination, when the attention is raised to a higher level, hallucinations are very few or totally absent, and the diminished attention shows itself chiefly by signs which are very similar to those of a normal inattentive state, such as a paraphasia similar to the fatigue paraphasia.

The memory for old events is not interfered with and simple calculations are done well, as are all habitual tasks, but where concentration is needed and combinatory efforts are required, the patient fails. The retentive faculty, however, is markedly altered. These patients also show a decided suggestibility and a marked tendency to confabulation, which is well-known in Korsakow's Psychosis.

August Hoch in 1906 published an article in the Review of Neurology and Psychiatry, entitled "A Study of Some Cases of Delirium Produced by Drugs," in which he gave his findings from four cases of Drug Deliria studied intensively. He found, in the first place, on the physical side, invariably a coated tongue, a foul breath and sordes at times. He also found occasional slight febrile movements, sometimes unsteadiness of the gait and some slight, but quite inconstant, tremor. The speech defect he was inclined to attribute in part to the bad condition of the mouth, in part to the clouding of consciousness, but it was very striking how much better patients spoke when they were aroused. There was no cyanosis and no flushing; on the contrary, the complexion of these patients appeared very pasty.

On the mental side, he found first of all a certain dullness and hebetude, so that at times it was difficult to arouse patients while at the same interview it might be quite easy. He repeatedly noted that in spite of a marked dullness, unobtrusive noises might be commented upon. In harmony with this dullness was the fact he often found a certain drowsiness even in the mildest cases. The most marked alteration was a constant tendency to dip down to a lower level of consciousness. When the consciousness sunk to a lower level, conditions somewhat similar to sleep were found inasmuch as there was a general disassociation; spontaneous trains of thought arose not connected with the outside world or with reality, very similar to dreams. At the same time, there were hallucinations of various senses, more especially sight, hearing and touch. He also found that these patients were disoriented, but he didn't find that the memory showed any definite impairment. He also found that delirious experiences and interpretations were held with remarkable tenacity, even during the convalescent stage, at a time when the patient was otherwise perfectly clear. He found that the mood was often quite indifferent. He found in one case a certain euphoria, a certain whining depression, some indications of apprehensiveness but never fear. As far as the motor side was concerned, a certain restlessness or disinclination to move seemed to be the rule. His study included morphine and bromine deliria, but I think that all of the durg deliria undoubtedly present characteristics which are common to all of them and that they are characterized by a delirium in which hallucinations of sight and hearing play quite a prominent part. The picture of the delirium is, as above mentioned, quite similar to that of alcohol. The hallucinations are the same, but one would never be inclined to mistake the one for the other. In the alcoholic delirium, the dilatation of peripheral vessels and a tendency to cyanosis and often evidence of anxiety or fear stand out quite prominently. These symptoms are not found in the drug deliria. Furthermore, the tremor, which is very marked in the alcoholic state, is slight and inconsisten in the drug deliria. The general responsiveness of the patient is different. The alcoholics do not appear dull and often make a strikingly natural impression on a casual observer so far as their manner of reaction to questions is concerned. In contradistinction to this, we find patients suffering with drug deliria presenting a certain dullness and hebetude, and it is much more difficult to rouse them than it is to rouse alcoholic patients. There seems to be a tendency to sink to lower levels of consciousness in the drug than in the alcoholic deliria. To a certain extent, the alcoholic patient shows a difference in that he is constantly busy while in the drug deliria he is more apt to be apathetic and slightly restless in bed.

As to the treatment of these drug habitues, so much has been written about this that we may state briefly that every physician undoubtedly has his own mode of treatment. I have found that the fairly rapid withdrawal of morphine and heroin gives the best results. I believe that in all of these cases we should start them off first with a thorough evacuation of the alimentary canal. If they show any signs of collapse, place them on stimulating treatment in the nature of strychnine, etc., and if abstinent symptoms are severe in the morphine cases give them at least ¼ gr. of morphine for the relief of this conditon. Inasmuch as all of the morphine habitues exaggerate greatly the amount of the drug they have been taking, I think that we should start them with a small dosage to see what effect this has upon their general condition and then to increase it very gradually until we find the average dose that will keep the unpleasant symptoms in abeyance. I believe that the drug may be withdrawn in at least a week. For the restlessness and sleeplessness, I think that bromide is probably the best substitute. In the treatment of the heroin cases, we have withdrawn the drug completely and placed them on strychnine and bromide here, with evacuation, as above outlined, without any unpleasant results. Cocaine may be withdrawn very rapidly without any unpleasant symptoms. There is no special treatment for the bromine case except the complete withdrawal and thorough cleaning out with salines. The immediate treatment of these cases, I believe, presents the least important side of the problem. I believe that, particularly in the heroin habitue, we have an individual who is subnormal and who will continue to be so regardless as to whether he is a drug habitue or not. I believe that these individuals should be committed to a Farm Colony for at least three years, and inasmuch as the mental side doesn't offer any prospects for future development, I think that they should be given a thorough course of manual training. After the three-year period, they should then be given a chance to see whether they may make their own way in society or not, and if this fails they should be returned to the farm for further training. I believe that there is a decided difference between the make-up of a morphine habitue and that of a heroin habitue, although many writers believe that all morphine addicts are psychopathic individuals. While they may have peculiar traits and peculiar make-ups, yet I think that the average morphine addict stands upon a much higher plane than the heroin addict does and this type of individual presents a much more serious problem. If, as some of the later writers believe, all habit-forming drugs are a refuge from internal conflicts, then the problem becomes psychological and psychiatrical. The individual should be analyzed thoroughly; his conflicts, if any, unearthed and thoroughly straightened out if this is possible and he should be made to feel that the better way of settling the whole difficulty is rather to face his problems squarely than to seek refuge in any form of addiction, be it alcohol or drug. I believe that the improvement of the physical side of all of these patients plays a very important problem in the treatment. I feel that in these individuals, just as with the insane, the general physical condition should be improved, and that the man's mental condition will then be on a much better and healthier plane than if he were in a very poor physical condition. He will furthermore be in a condition to withstand temptation to return to the use of the drug. I believe that the Farm Colonies offer the best place for the treatment of these cases after the acute symptoms have been treated in a drug ward, and I feel that a great deal can be accomplished by the establishment of such colonies under the supervision of men who understand not only the medical side, but who also understand individual reactions and characteristics and can discuss each man's problem with him.

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A REPORT OF THE EXAMINATION OF THE SPINAL FLUID OF ONE HUNDRED LUETICS.

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THE prognostic significance of certain changes in the spinal fluid of luetics makes it almost imperative that this serological test be made in all cases of syphilis, irrespective of the stage of the disease. In order to confirm or refute the findings of others, the rule was instituted at the Kings County Hospital, that whenever possible, examinations of the spinal fluid should be made of all patients seeking admission to the wards for syphilis.

This report is an analysis of the findings from the first hundred males examined. As a number of interesting features were observed, and the results obtained so closely tallied with the published reports of others working along the same line, this preliminary report is offered for publication.

The patients from whom the spinal fluid was obtained were suffering from syphilis in its various stages and complications, as lumber puncture was made in practically all of the luetic males, no attempt was made to pick out those, who from suggestive pathognomonic symptoms, might be suspected of having abnormal spinal fluid.

Among the hundred examined, eight had the primary sclerosis and inguinal adenopathy, but no cutaneous eruption. The spinal fluid was normal in all of these cases, but the blood of five was positive.

Ten had chancres and a beginning secondary rash, in three of these the fluid was both Wasserman and globulin positive, with an increased number of cells, thirty in one, thirty-eight in another and fifty in the third. All of the three had severe constitutional symptoms, the eruption was papular and very profuse. The patient with the highest cell count ran a temperature of one hundred and four degrees, for two weeks, he complained of severe headache, and part of the time he was stuporous. After six weeks of intensive treatment the spinal fluid was found to be negative, but the blood was still strongly positive.

Twenty-five of the patients were well along in the secondary stage, all had positive blood, but only two gave a positive fluid reaction, the cell count in one was thirty-five and two hundred in the other.

The history of the latter is interesting. On admission to the hospital he was well advanced in the secondary stage of the disease. His body was covered with a papulo-squamous syphiloderm, in addition to the eruption there was a large abrasion on his left cheek. His general condition was bad, his temperature was one hundred and two per rectum. The blood Wassermann was four plus, but the fluid was not examined at that time. Forty-eight hours after entering the hospital, his temperature suddenly rose to one hundred and five. A swelling began around the abrasion, which rapidly spread until the whole face and head became involved.

The diagnosis of erysipelas was made and he was removed to another ward. In due course of time he recovered from the intercurrent disease and was returned to our ward. There did not seem to be any change in the syphilitic eruption, it had neither faded nor become any worse. The blood reaction had dropped from four to two plus. A lumber puncture was then made and the fluid was found to be strongly positive with a cell count of over two hundred. He was kept under observation, and given expectant treatment. In about four weeks the blood reaction rose to four plus, the fluid remaining as at the first examination. He was then put upon an intensive course anti-syphilitic treatment, when he left the hospital, three months later, the spinal fluid seemed to be normal and the blood only weakly positive.

It is unfortunate that this patient could not have been kept under observation for a number of years; for it would be interesting to know if he might not develop some syphilitic nerve disease in the future. It seems almost improbable that a two-months course of treatment, although intensive in character, could bring about a complete cure in a case with such a severe onset and subsequent symptoms. One is also led to wonder if the fluid changes were wholly syphilitic, or if they might not have been influenced in part by the erysipelas.

Five of the hundred were examples of delayed eruptions, the cutaneous manifestations not appearing until two or three months after the primary lesion. The blood of these patients was positive but the fluid was negative.

Twenty-three patients had some tertiary cutaneous lesion, four of them had symptoms suggestive of beginning tabes. The blood of the twenty-three was positive, but only six had positive fluid, the four with suggestive tabetic symptoms were included in this number.

Two patients had syphilitic ulcers of the legs, one had specific myocarditis, and one was well advanced in tuberculosis, the tubercular process presumably ingrafted upon pulmonary syphilis. All except one of the ulcer cases had positive blood but negative fluid.

Among the one hundred examined there were twenty-five cases of nerve syphilis, fifteen were tabetic, five were paretic and five had some other type of cerebro-spinal syphilis.

Thirteen of the tabetics had positive fluid and in fourteen the blood was plus. The patient in whom both the blood and fluid were negative had a convincing history of syphilis, and had all of the clinical evidences of advanced tabes. The cell count in the positive fluids ranged from sixty to three hundred. The case with the highest number of cells, had received, at another hospital, intensive antiluetic treatment, including four inter spinous injections of salvarsanized serum.

All of the paretics had positive fluid, and at the first examination the blood of four were positive four plus, and one was negative, this, however, became positive after one dose of salvarsan.

Two of the cases classed as cebro-spinal syphilis had brain tumors, bumma. One of them was blind from atrophy of the optic nerve, both the fluid and blood were positive in this case. The other had epileptiform seizures, his blood was four plus but the fluid was negative. Three patients were hemiplegic, the results of syphiletic apoplexy, they were young men the oldest thirty-four, the youngest only twenty-six. The fluid was positive in two, the one with the negative fluid had received a very intensive course of treatment before entering Kings County Hospital.

As stated above this report only covers one hundred cases, taken wholly from the male service. From clinical observation it is more than probable that if the cases had been women, the number of abnormal fluids occurring in the early stage of the infection would have been greater, for there seems to be a tendency to early nerve disturbances in the female, this fact has been noted and verified by a number of observers.

All of the patients with abnormal or positive fluid were carefully examined by a competent neurologist, in order to establish if possible the neurological diagnosis and prognosis.

While this report is of no great intrinsic value, it serves to emphasize the fact that syphilis often involves the cerebro-spinal system early in the course of the disease, and further it teaches the advisability of making frequent examinations of the spinal fluid as a guide to treatment and future prognosis.

factors [illegible] State of New [illegible] of their threatened need. Through [illegible] on Prevention of Tuberculosis of the New York State [illegible] Association, the County Tuberculosis Law has been amended so that the erection of hospitals is made mandatory in counties having more than 35,000 population. Twenty counties are thus affected of which eight had already taken some preliminary steps and now eleven more have started definite plans, begun the choice of sites, etc. The law specifies that these hospitals shall be ready for occupancy by July 1st, 1918. Should the County Supervisors fail to be ready to start work by January 1st, the State Commissioner of Health shall forthwith proceed to locate, construct and place in operation a tuberculosis hospital in and for such county, the capacity of which shall not exceed the average number of deaths per annum from tuberculosis in such county during the last five years. Gauged by the difficulty that has been experienced in the past in persuading the more rural communities to establish tuberculosis sanitaria, this is a very distinct advance in the interest of both prevention and cure. It is a pertinent question whether the method of calculating the capacity is a well chosen one; while deaths from tuberculosis constitute a considerable proportion of every local death rate, the variations by counties might well be so great as to provide inadequate accommodations in one or more sections of the State. This is especially to be considered in view of the fact that these hospitals are planned to accommodate soldiers invalided home on account of tuberculosis. Canadian experience has shown that the few and widely scattered sanitaria have not been adequate for Canadian soldiers who have developed tubercular troubles, largely because the authorities have been unwilling to insist upon segregation of these men at a distance from their homes. They have felt that such a step would be a hardship by reason of home sickness on the part of the patient and the irksomeness of separation on the part of the family. This condition would not be of such moment in the case of New York soldiers sent to an institution within their own county, as they would be separated by a few miles at most from their families and frequent visiting would be practical. All who have had experience with the institutional care of tuberculosis will grant the wisdom of a sojourn for every sufferer where possible, if only to instill habits of regularity and care by precept and example that can rarely be inculcated by precept alone. It is s

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state, and hospital care for the moderate and advanced cases thus discovered should be provided for by the local communities, cities or counties. He further urges that soldiers invalided because of tuberculosis should be kept under military discipline and required to go into tuberculosis hospital for care and treatment.

H. G. W.

WELCOME HEALTH DEPARTMENT CHANGES

THE recent announcement that the Health Department has at last appointed a Deputy Commissioner in charge of Brooklyn, as well as a new Assistant Sanitary Superintendent, is particularly gratifying to the medical profession of this Borough. After a competitive examination limited to Health Department officers resident in Brooklyn, Dr. B. Frank Knause was appointed Sanitary Superintendent and Deputy Commissioner and Dr. Herman T. Peck, Assistant Sanitary Superintendent. Both these gentlemen have been residents of Brooklyn for a number of years; both have a broad experience in Health Department affairs and enviable records in their work. Their appointment to the immediate charge of the Health Department work in this Borough is an earnest of the spirit of co-operation that the department has striven to show and bespeaks the need for most cordial co-operation on the part of Brooklyn physicians. The Health Department has declared its desire to meet the criticisms of the profession in Brooklyn that have been directed against it for several years. It is incumbent on every physician in Brooklyn to support Dr. Knause and Dr. Peck in every possible way in order that they may achieve for themselves the broad results that their administrative capacity promises. It is a fair suggestion that complaints and criticisms on Health Board matters should be taken directly to the new Borough Officers who will doubtless welcome every opportunity to improve the work of their department in this Borough. They cannot be justly blamed for the persistence of abuses that are not brought specifically to their notice.

H. G. W.

CHANGES IN THE LIBRARY OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

IT is announced by the Directing Librarian, Dr. William Browning, that Mr. Albert T. Huntington, for many years in charge of the library of the Kings County Medical Society, has resigned and that Mr. Charles Frankenberger has been appointed as librarian and superintendent of the building.

Mr. Frankenberger brings to his new position an experience of ten years as librarian of the library of the Jefferson Medical College in Philadelphia, and for twelve years previous he was assistant to Mr. Fisher, the Librarian of the College of Physicians, Philadelphia.

It has for some time been apparent that the present plant is inadequate to the needs of an up-to-date medical library. The society has been sadly hampered by the lack of funds for the acquisition of new books and for the proper housing of those that have already accumulated. Much has already been accomplished in the way of repairs to the building, in the disposal of accumulated files of magazines and duplicate volumes and in the more orderly disposal that has been gained by rearrangements of volumes, but much requires to be done. Added space is imperative, as are added funds to keep up the binding of periodicals and the purchase of new publications. Mr. Frankenberger's enthusiasm added to his long experience promises much in the way of increased efficiency, but he needs the help of every physician in Brooklyn and on Long Island, to whom a thoroughly equipped medical library is an imperative need.

Incidentally, Dr. William Browning has been elected President of the Association of Medical Librarians, an honor which casts reflected glory on the library of which he is the head.

H. G. W.

Obituaries

DEPARTMENT UNDER THE CHARGE OF WILLIAM SCHROEDER, M.D.

FRANK ELBERT APPLEGATE STONEY, M.D.

Dr. Stoney was born May 1, 1874, at Matawan, N. J., and died on May 13, 1917, at Lakewood, N. J. He was the son of James B. Stoney and Zephena Eliza Carhart, boh of New Jersey. His medical education was under the direction of Doctors Landon Carter Gray and Benjamin F. Westbrook, receiving his degree of M.D. from the Long Island College Hospital in 1897. This was followed as interne in the N. Y. Polyclinic Hospital. During his professional life in this city he was physician to the Bay Ridge Hospital, Chief of the Tubercular Clinic of Bay Ridge Dispensary, a member of The Medical Society County of Kings, 1899-1917, Associated Physicians of Long Island, 1906-1917; American Medical Association, Medical Society of Greater New York and the Medical Society of Bay Ridge.

W. S., Sr.

RICHARD PAUL WILLIAMS, M.D.

Dr. Williams was born in Montpelier, Ohio, on May 29, 1885, and died at Farmingdale, Long Island, April 12, 1917. He was the son of Joseph W. Williams and Emma Starr, both of Ohio. Dr. Williams was married to Florence Green of Jersey City on February 24, 1910.

His early education was obtained at the public schools and military academy, his medical education at the University of Michigan and the Long Island College Hospital, where he received his degree in 1908. This was followed as interne in the same institution. During his professional life he held the position of Surgeon to the Nassau County-Hempstead and Southside Hospitals, was a member of the Queens-Nassau County Medical Society, American Medical Association, Southside Clinical Societies, and the Associated Physicians of Long Island, 1913-1917.

W. S., Sr.

AUGUSTUS ALPHONSO HUSSEY, A.B., M.D., F.A.C.S.

Dr. Hussey was born May 26, 1872, at Houlton, Me., and died in Brooklyn, N. Y., June 20, 1917. He was educated at Ricker Classical Institute and Bowdoin College, where he received his A.B. in 1893. His medical education was at the College of Physicians and Surgeons, N. Y., graduating in the Class of 1896. This was followed as interne in the Brooklyn Hospital. During his professional life he held the position of Obstretrician to the Brooklyn, Norwegian and Bushwick Hospitals.

He was a member of The Medical Society County of Kings from 1897-1917, American Medical Association, Brooklyn Gynecological Society, of which he was president in 1911-12, Brooklyn Pathological Society, New York Obstetric Society, and the Associated Physicians of Long Island 1908-1917.

Dr. Hussey is survived by his widow and two children.

W. S., Sr.

BARTON DWIGHT SKINNER, M.D.

Dr. Skinner was born in Greenport, Long Island, in 1844, where he died June 22, 1917. He was the son of the late Dr. Ezekiel E. D. Skinner. His early education was received in the public schools and the Connecticut Literary institute. His medical education was received at Bellevue Hospital Medical College, where he was graduated in 1869.

He was a member of Company H, 127th Regiment, N. Y. S. Volunteers from 1862-65. During his professional life he was a member of Suffolk County Medical Society of which he was president in 1887-88, American Medical Association, Associated Physicians of Long Island, 1898-1917; Physician to the East Long Island Hospital. Dr. Skinner also held the position of supervisor of Southold, President of Greenport and President of the Board of Education of Greenport. He was married in 1876 to Emma A. Terry, of Orient, L. I. He is survived by his daughter, Mrs. D. S. Stanley Corwin.

Dr. Skinner held the position of Treasurer of the Suffolk County Medical Society for thirty-two years.

W. S., Sr.

JOHN DENNIS TIERNEY

Dr. Tierney was born at Newburgh, N. Y., June 8, 1887, and died at Ridgewood, L. I., April 17, 1917. He was the son of Dennis George and Mary Frances Tierney. His early education was received in the public schools of New York city. His medical education was at Cornell University where he received the degree of M.D. in 1911. This was followed as interne in St. Mary's Hospital at Jamaica.

During his professional life he held the position of Surgeon at St. Mary's Hospital, was a member of the Associated Physicians of Long Island from 1916-17. He is survived by his widow, Hannah C. Crawley.

W. S., Sr.

CHARLES HORACE LINCOLN MOSELEY, M.D.

Dr. Moseley was born in Brooklyn, N. Y., November 1, 1865, and died at Poughkeepsie, N. Y., July 31, 1917. He was the son of Dr. Charles E. Moseley. His medical education was received at the University of New York, graduating in the class of 1890. For many years he was in practice in this city, during which time he was physician to the Bushwick and German Hospitals.

He was a member of the Medical Society County of Kings, 1914-15; Brooklyn Medical Society, 1894-1917, and Commonwealth Lodge, F. & A. M.

W. S., Sr.

JOHN CARPENTER SCHAPPS, M.D.

Dr. Schapps was born in Brooklyn, N. Y., July 21, 1856, and died at Seattle, Washington, May 15, 1917. He was the son of Cornelius H. Schapps, M.D., was educated at Adelphi Academy and Columbia University. His medical education was received at Bellevue Hospital Medical College, receiving the degree of M.D. in 1880. This was followed as interne at St. Mary's, St. Vincent and Bellevue Hospitals, also Asst. Surg. U. S. A. 1880-81.

He remained in the practice of medicine in Brooklyn, N. Y., until 1896, when he removed to Pony, Montana. During this time he was surgeon to the New York Orthopedic Hospital and the Hospital for Ruptured and Crippled.

He was a member of the Medical Society County of Kings from 1881-96.

Dr. Schapps' maternal grandfather was Dr. John Carpenter, one of the organizers of the Medical Society County of Kings in 1822 and its first treasurer.

Dr. Schapps contribution to medical literature:

"Four cases of Penetrating Wounds of the Abdomen."
"Injuries to the Brain."
"Principles of Wound Dressing."
"Sterilization of Catgut."
"Treatment of fracture of the Ankle Joint."
"Deformity Following Resection of the Knee."
"Orthopethic of the Poor."
"Treatment of Potts' Disease."
"The Mechanics of Flatfoot."

W. S., Sr.

EDWARD GEORGE RAVE, M.D.

Dr. Rave was born in Germany January 19, 1844, and died at Hicksville, Long Island, July 23, 1917. He was the son of Dr. Adolph G. Rave. His medical education was received at the New York University, where he received his degree of M. D. in 1876.

During his professional life he held the position of physician to the Long Island Railroad and St. Mary's Hospital at Jamaica. He also held the position of Curator of Botany at the Brooklyn College of Pharmacy. He was a member of the Associated Physicians of Long Island from 1900-15; Queens-Nassau County Medical Society and of Herder Lodge, No. 698, F. & A. M., of which he was Master.

Dr. Rave leaves his widow, Mary M., three sons, Adolph G., Albert G., Edward W. P., and a daughter, Mrs. Jacob Oswald.

W. S., Sr.

HENRY GREEN PRESTON, M.D.

Dr. Preston was born in Hartford, Conn., in 1847 and died in Brooklyn, N. Y., June 21, 1917. He was educated at the New Brunswick University. His medical education was received at Bellevue Hospital Medical College, where he was graduated in 1869.

He began the practice of medicine in New Brunswick, removed

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New York University, where he was graduated in 1892. During his professional life he was physician to the Coney Island and Bay Ridge Hospitals, a member of the Medical Society County of Kings from 1904-10, and the Brooklyn Pediatric Society, also a member of Cassia Lodge, No. 445, F. & A. M., of which he was a past-master.

He is survived by his wife, Julie Stamper, and a daughter, Harriet Beck.

W. S., Sr.

WILLIAM HASSERT BIGGAM, M.D.

Dr. Biggam was born in 1860 at Gloversville and died in Brooklyn, N. Y., May 8, 1917. He was a graduate of the College of Physicians and Surgeons, N. Y., in the class of 1881. He was a member of the Associated Physicians of Long Island from 1900-17, and physician to the Home for Aged Men. He is survived by a son, Churchill Biggam.

W. S., Sr.

HYMAN S. SHLEVIN, M.D.

Dr. Schlevin was born in Russia forty-nine years ago and died in Brooklyn, N. Y., May 12, 1917. His medical education was received at Yale University where he was graduated in the class of 1892. He is survived by his widow, Annie, and three children, Edmund, Vivienne and Clarence.

W. S., Sr.

Report of cases:
A. (1) Gastric Ulcer. Haemorrhage. Operation. Patient.
(2) Undescended Testes. Bevan Operation. Patient.
(3) Compound Fracture of the Superior Maxilla. Patient.
(4) Compound Fracture of the Humerus. Patient.
(5) Third Degree Burns of the Forearm. Patient. (15 Minutes.)
Frank E. Brown, M.D.
B. (1) Torsion Cyst of the Appendix. Specimen.
(2) Recurrent Abscess of Lung. Operation. Patient. (15 minutes.)
E. Arthur Parker, M.D.
C. Papillomatous Cysts of the Ovary. Case Reports. (15 minutes.)
J. Bion Bogart, M.D.
Paper: "Skin Grafting. A Simplified Method." Roger Durham, M.D.
Discussion opened by Edward J. McEntee, M.D. and Royale H. Fowler, M.D.

Gastric Ulcer. Hemorrhage. Operation.

Frank E. Brown, M.D.

The first case which I have to present this evening is one of gastric ulcer with hemorrhage. The patient is forty years of age. The past history is uneventful with the exception of an attack of jaundice and fever when he was about sixteen years old which lasted five or six weeks. He had a second slight attack two months before the beginning of the present trouble. Two weeks before admission to the hospital, the patient had what seemed to be an ordinary attack of ptomain poisoning with nauusea and vomiting, followed in a day or two with an enterocolitis with green stools and intestinal mucus tinged with blood. Following this there were tarry stools. This condition gradually cleared up and apparently the patient was geetting well.

On December 30th, at 4:00 o'clock in the morning, he awoke and vomited a large amount of bright red blood, became unconscious and was practically in that condition when I saw him about a half hour later. He was the typical picture of hemorrhage. He had an imperceptible pulse and apparently was in extremis. I gave him morphin to the limit and let him alone for twenty-four hours, during which time he had no further hemorrhage and his general condition had improved somewhat. He was removed to the hospital, where the same general treatment (nothing by mouth, morphin and nutrient enemata) was followed out. Twenty-four hours after admission; that is, forty-eight hours after the first hemorrhage he had a second hemorrhage and again became unconscious. At this time his blood count was taken. On admission he had seventy-two per cent of hemoglobin and 2,000,300 reds. After the second hemorrhage it dropped to 40 per cent and on the following morning it was thirty per cent. Nutrient enemata and saline were kept up for eleven days, being tolerated very well, and he was given slight mouth feeding. It was found that ice water caused nausea and this was accordingly discontinued. At the end of eleven days it was decided to try to do something. He was removed to the operating room. On entering the abdomen the stomach was found adherent to the anterior abdominal wall throughout its whole extent. A mass occupied the region of the gall-bladder, pylorus and duodenum. It was twice the size of a fist and of a stony hardness resembling carcinoma. The individual structures could not be demonstrated. No anterior stomach wall could be obtained for a gastroenterostomy and with considerable difficulty enough posterior. The stomach was first freed in order to do the gastroenterostomy and he left the table in fair to poor condition and his further stay in the hospital was absolutely uneventful. He was in the hospital for seventeen days after the operation. On leaving the hospital the hemoglobin had risen to sixty per cent and the red cells were 2,000,000. From that time to the present he has steadily gained in weight and strength, eating all kinds of food, and has been back to work for over a year and has gained fifty-five pounds in flesh.

The first point of interest in this case was in regard to what to do for the patient, not at the time of the hemorrhage, for then there was nothing to do for him because he was in extremis, but later on after he had been in the hospital, what we could accomplish by operation—whether it was worth while to try it, or whether we were justified in trying to continue stomach feeding.

The second point was in regard to the question of how to treat the patient. He had forty per cent of hemoglobin at the time of the operation and 1,880,000 reds—whether we dare do a transfusion or simply rely upon infusion on the table if it became necessary. We decided to wait until during the operation and do an infusion if necessary and transfuse later. Neither of these measures was necessary.

Third Degree Burns of the Forearm. Patient.

Frank E. Brown, M.D.

This is a case of burn of the arm. Roughly speaking, the history is as follows:

In June, 1915, while working in a laundry at a hot mangle, this arm was caught between the red hot rollers and held in that position for approximately five minutes. The machinery could not be stopped. The burn and the crush extended from the wrist along the forearm up to the midarm and chiefly involved the structures on the back of the forearm. The question of treatment came up on her admission to the hospital. Amputation was considered and even advised by some. We decided, however, to see what we could do with it. We used bicarbonate of soda solution for the relief of the burn and gave morphin and the patient was carried along for two weeks. During the daily dressings, for two weeks after admission, the cooked tissue was removed. The entire area from the wrist to the elbow, on the dorsum of the arm, sloughed down to the ulna and radius and interosseous membrane. A portion of the ulna became necrosed. Two months afterwards this was removed and at this time an operation was done to cover it in. The woman remained in the hospital for five months. At the end of six months the arm was healed. There was an attempt made to limit contractions, but this was given up on account of pain. On two occasions since she has had an anesthetic to straighten out the tendons and at the present time she has a hand which is of decided value to her. She is able to take care of her home, she washes, irons and sews, she can grab hold of a book and raise a pail of water with this hand, and she has good firm power in those fingers.

This case is an example of a serious injury that has really an excellent functional result.

I might have said at the beginning that I did not know whether some tendon transplantation might possibly be necessary in this case, but I determined that as long as she has constantly improved the way she has that it is well enough to leave things as they are.

Dr. John D. Sullivan, in discussion, said:

"I would like to say just a word about the treatment of burns. It is a very common trouble with us. In the March number of the Annals of Surgery there is a short article by Dr. E. Percy Robinson of New York, on the artificial proliferation of cells in the treatment of burns, by the use of horse serum. He reports one case in which a remarkably good result was obtained by spraying horse serum on to the burned surface and covering it with oiled silk. He also makes a very valuable point in regard to the puncturing of blisters after burns. I suppose most of us know that it is bad practice to puncture those blisters, but still it is often done at the time that the first dressing is removed. Now, that natural serum under those blebs or blisters is the best dressing in the world for those wounds and if it can be kept up you can be pretty sure that the serum will help the cells to grow and heal the wound.

"I just wish to make that remark in regard to the preservation of the natural serum in order that it might be left there as long as possible. I think great harm is done when these blisters are punctured or ruptured and believe if possible it should be avoided."

Compound Fracture of the Superior Maxilla. Patient.

Frank E. Brown, M.D.

This is a case of compound fracture of the superior maxilla. While crossing the street, this boy stepped on a manhole cover which exploded and went up in the air forty feet, according to the statements of bystanders, and the boy went with it. He came down on his face, landing on the edge of the manhole, and sustained a compound fracture of the nose, which was smashed right in, together with scalp wounds and numerous minor cuts and burns, and the extremely interesting condition of compound fracture through the palate plate of the superior maxilla. The maxillae were separated for a distance of half an inch and with it there was undoubtedly a fracture of the anterior fossa. He was unconscious immediately after the injury and gradually returned to a semiconscious state. He was taken to the operating room and an attempt made to repair the defect in the palate and straighten out the nose. I had considerable difficulty with the septum and nasal bones, but finally got them reasonably in shape and was able, with the use of lion jaw forceps, to force the superior maxilla back in place. I thought we would have to use Murphy's stunt of wiring the bones, but we found that we could hold them in place by simply suturing the hard and soft palate, and they healed by primary union just as soon as they granulated in and he has been perfectly well since.

This youngster sustained a compound fracture of the humerus by falling three stories from the roof of a house. He was brought into the hospital with a fracture of the humerus about one inch below the anatomical neck, the humerus protruding from this wound and the tissues torn in front of it. There was considerable dirt in the wound. He was taken to the operating room. The wound edges were cleaned up, the wound was dried and apposition of the bone ends obtained fairly satisfactorily, after which iodin was applied to all the crevices and a rubber tissue drain inserted above and below. He was sent back to the ward and the drains were removed on the fifth day. There was no local reaction. The wound healed at the end of two weeks and the extension which we had applied over the side of the bed gave us satisfactory union at the end of four weeks. There is no shortening.

This case is simply reported as an illustration of what we can sometimes get away with without the Carrel method of treatment.

This last patient, gentlemen, has consented to come here in order to demonstrate the condition of undescended testicle. This is the oldest case I have operated on. At the time of operation he had a mass which was thought to be testicular, but proved to be a varicocele with dilated veins in the canal within a half inch of the internal ring. The testicle was in the abdomen and was brought down to the internal ring. Severance of these veins brought the testicle down to the internal ring and a Bevan operation was done with division of the structures except the vas deferens and the artery of the vas. This brought the testicle well down to the scrotum in good position.

I have done this operation in half a dozen cases and have had no trouble with the testicle afterwards.

Undescended Testis, Bevan Operation.

Frank E. Brown, M.D.

Dr. W. H. Rankin, in discussion, said:

I would like to report a case that I operated upon this morning in a boy three years of age with both testes undescended. The child was sent to the hospital because of abdominal pain and on opening the inguinal canal and peritoneum, I found both testes in the pelvis and behind the bladder. Evidently, in the course of their development and descent, they had carried a fold of peritoneum with them and had never separated, with the result that there was a broad band of peritoneum behind the bladder with a vas and testes in the middle firmly joined within this fold and a plexus of veins at each extremity of the broad ligament. In dividing the band and separating the cord, it was quite possible to bring both the testes into the scrotum where they should be normally. It was a rather interesting condition to me to find the testes descended together and joined by this very strong band of peritoneum. The embryology and anatomy of such abnormality is rather interesting. An intertesting thing also in this case was the fact that the epididymis was separated from the glands on both sides.

Undescended Testis. Bevan Operation. Patient.

Frank E. Brown, M.D.

Dr. J. Bion Bogart, in discussion, said:

"Instead of prolonging the discussion I would like to provoke it by asking the question, Why, in the first place, operate for undescended testicle? I would answer that in part by saying that, as far as I can recall, every case of undescended testicle has been accompanied by a hernia." After some further remarks along this line, the doctor went on to say: "Of course, where there is a definite hernia which is prominent enough to call for operation, that is a good reason to operate for undescended testicle.

"What is the use of the testicle after it is brought down, or, as Dr. Brown has very properly said, well down into the scrotum? Very shortly after if you examine the patient, you will find it high up in the scrotum, lying up against the pubic bone, subject to injury where before it was not subject to injury in the inguinal canal. What is the use of the testicle after it is brought down? We must divide all the structures which give it nourishment and in many cases that I have operated I have had the reflection that if the testicle were mine I would have considered it better to let it alone than to have the nutrition interfered with through getting it down into the scrotum."

Dr. Thomas B. Spence, in discussion, said:

"I do not know what figures there are to substantiate it, but we all know that there is strong belief that undescended testicle is more liable to undergo malignant degeneration than descended testicle. I have had a recent illustration of that in a case of undescended testicles that I operated upon about six months ago. Both testicles were entirely in the abdomen. One had undergone a teratomatous change, so that the pathologist reported to me, and I suppose it was sarcoma. The later development tended to prove there was sarcoma in it because there is a large recurrence. It was not a testicle going part way down the ring and receiving traumatism. It was entirely in the abdomen. I think the tendency to degeneration is an inducement to operation."

Dr. Mathias Figueira, in discussion, said:

"I agree with the statement that undescended testicle is apt to undergo malignant degeneration. I have seen two cases in my own practice in which undescended testicle had to be operated for malignant disease. I saw one when I was a student a good many years ago. That was the first one I saw. In the two cases which I have seen in my own practice in which the testicle had to be removed there was sarcoma in one case and carcinoma in the other.

"With regard to the usefulness of the testicle after it is in the scrotum, from experience in the cases that I have seen it doesn't seem to be of much use. In the case which was shown here tonight the patient has an excuse for a testicle there, but I don't suppose it is any good to him or anybody else. I have seen a good many like that and yet I have never seen a statement by any one removing those testicles and examining them as to the condition of the secreting elements of the gland or of the vas deferens and yet I will not undertake to say that the gland is perfectly useless. It may not be and yet from experience it seems to be so."

Dr. Richard W. Westbrook, in discussion, said:

"It has been my belief for a long time past that such testes were functionally useless and it has always been my custom to advise removal of the testicle beyond the age of puberty; at least if the anxious parents and child are desirous of having the testicle anchored, I have usually done it below the age of puberty, but, as a rule, I have not, as Dr. Bogart said, operated for hernia.

"It seems to me that the proper thing to do, if it will be accepted, is to remove non-descended testicle unless in very young children where one can get hold of the testicle and bring it down, and in that way one does away with the danger of degenerative growths and also with securing the hernia at the same time."

Dr. Frank E. Brown, in closing the discussion, said:

"In regard to the case of undescended testicle in that adult: he had pain in the canal which was so great that I thought the testicle was being pressed upon. He refused to have the testicle removed unless it was malignant."

Torsion Cyst of the Appendix. Specimens.

E. Arthur Parker, M.D.

Patient Miss C. E., age 42 years, occupation domestic. Three days before entering St. Mary's Hospital she had general abdominal pain, localizing in the right lower quadrant, nausea and vomiting. Temperature, 100; pulse, 100; respirations, 26. Urine, negative. White cells, 10,800. Polys., 81 per cent.

March 29th, 1915: Right rectus incision; appendix, enormous in size, twisted upon its base as a pedicle; tip markedly congested, dipping down to the broad ligament. Appendix ligated, cauterized and stump inverted. The post-operative course was uneventful. The patient was discharged cured April 12th, 1915.

Retention Cyst of the Appendix with Intestinal Obstruction: Patient operated upon April 12th, 1917, at St. Mary's Hospital by Dr. M. T. Reynolds. Mrs. J. A., age 63 years, nativity Germany. For a week pain in the right lower quadrant, obstinate constipation, abdominal distention and vomiting. Urine, negative. White cells, 16,400. Polys., 86 per cent. Temperature, 98 3/5; pulse, 100. Symptoms point to intestinal obstruction.

Operation showed the colon and ileum to be flat and congested. Hydrops of the appendix pressing upon the colon, causing the obstruction. Upon removal of the appendix the intestine dilated. Patient still in the hospital.

These specimens show two different types of cyst of the appendix, the torsion and the retention.

Recurrent Abscess of Lung. Operation.

E. Arthur Parker, M.D.

Patient, Wm. M., age 24, occupation plumber.

Pneumonia at 12. Father died of tuberculosis. During the past month the patient has had grippe, pneumonia and pleurisy. He now has pain across the upper left chest.

Urine, negative. Sputum contains streptococci; no tubercle bacilli. Blood count, 24,400 white cells; 88 per cent of polys. The temperature varies from 99 2/5 to 102 degrees; pulse, 84 to 120. Abscess located by physical signs and x-ray in upper left lung.

July 23d, 1914: Cocain anesthesia; rib subperiosteally excised; pleura opened and wound packed. July 25th, 1914: Dressing removed; artery clamp inserted into abscess; opening dilated wound drainage. The patient was discharged cured July 25th, 1914.

November 29th, 1916: The patient again entered St. Mary's Hospital. For four months he had a cough following tonsillitis. There is pain in the left side, low down. At times he has cough which is so severe that he vomits. Temperature, 101 to 98 2/5; pulse, 116 to 100. Sputum: Staphylococci and streptococci. Urine, negative. X-ray, increased density of lung markings. Left chest, fifth rib partially restored. Upper lung expanded; lower not expanded. Cocain anesthesia. Subperiosteal resection of rib. Pleura punctured. Abscess in lung opened and drained. Patient discharged January 10th, 1917; temperature, 98 3/5; pulse, 90; wound nearly healed.

Torsion Cyst of the Appendix.

E. Arthur Parker, M.D.

Dr. W. H. Rankin, in discussion, said:

About two months ago in operating on a case of ruptured appendix with a mass, on opening the abdomen, I found a cyst of the appendix fully the size of a large pear. The man had been suffering for six months with slight recurrent attacks of pain that had rapidly subsided.

This time, however, the on-coming symptoms were much more severe and so he was compelled to seek relief in the hospital. When the abdomen was open this pear-shaped mass was removed together with its attachment to the cecum. He was closed up and did perfectly well. I was surprised to see this large cyst that had been troubling this man for six months without any digestive disturbance whatever, and aside from the local pain which he experienced from the weight of the cyst, he had no disturbances whatever of the gastro intestinal tract.

Papillomatous Cysts of the Ovary. Case Reports.

J. Bion Bogart, M.D.

No doubt you all received a reprint of an article published by Dr. Clarence R. Hyde in the American Journal of Obstetrics and Gynecology recently. That serves as a text for what I have to say this evening.

I, in common with many of you from time to time meet with papillomatous cysts of the ovary. The first case that I wish to speak of was transferred from the medical side to my service in the Methodist-Episcopal Hospital about ten years ago. The patient had been aspirated on the day previous and a small quantity of viscid fluid removed from the abdomen. When I saw her she was suffering from fever, rapid pulse, was completely prostrated and had a very large ascitic abdomen. The condition was so unpromising at that time that I did not care to undertake an operation and postponed it. That same evening I was called up on the telephone by the house surgeon, telling me that the patient's condition was growing rapidly worse and if I expected to do anything that it must be now or never. I accordingly went to the hospital and had the patient sent to the operating room. Her pulse then was about 140, the temperature was about 103 and she was very ill. On opening the abdomen a large quantity (several quarts) of viscid fluid escaped and a lot of papillomatous debris, indicating at once that there had been a rupture of a papillomatous cyst and that it had diffused itself pretty well throughout the abdomen. I hastily emptied the abdomen as well as I possibly could and removed both ovaries, they being the source of the trouble. I don't recall certainly which ovary it was which was the seat of the original trouble, but I think it was the right one. I closed the abdomen hastily with drainage and the patient was put to bed. I felt so hopeless about the patient's recovery that in making the rounds on the following day before calling on her I inquired about her, supposing she had died during the night, and, to my great surprise, was informed that she was much better. She recovered from the operation and was discharged from the hospital in fairly good condition. I presented the patient to the Surgical Society about four years ago. She was then in perfect health and had had no recurrence of her trouble. I am mistaken about that. She went for four years without any further trouble and I did present her to the Surgical Society four years ago ,but in the interval she developed a pelvic abscess and was re-admitted to the Methodist-Episcopal Hospital. I opened this abscess, obtaining about a half pint of pus that had been in the cul-de-sac. She made a good recovery from this operation and went home, but returned to the hospital about one month later with a bloody discharge from the uterus and with appearances which indicated, grossly, that she was suffering from carcinoma of the cervix and of the uterus. In the meantime she had run down and was in very poor general condition. The trouble in the uterus was so far advanced that I merely curetted away the debris and packed it with iodoform gauze through the vagina and a week later removed the gauze intact. I asked for a ten per cent solution of chlorid of zinc. Such a solution was handed to me and I used it. This was applied on strips of gauze, passing it up into the uterus, which was not a very large one, and having run out the excess of the solution, I packed the vagina with pledgets of cotton which had been saturated in a bicarbonate of sodium solution, completely filling the vagina with the cotton. The patient suffered very much with pain and required quite some morphin to make her comfortable and the next day it was apparent that the chlorid of zinc had escaped in spite of the protective packing in the vagina, had reached the vulva and there was the evidence of a slough. As a matter of fact, there was a slough in about ten days of a cast of not only the interior of the uterus, but of the entire vagina as well. It was about as large as a banana. It came away very cleanly and left a healthy looking surface which healed nicely, but it closed the vagina practically except for a depth of one and one-half inches. The patient, as I say, made a good recovery and I didn't see her again until the first part of the current year. At that time she came to me and said that after the last operation her weight had increased to 178 pounds. She was a woman of ordinary size, height and build and had enjoyed robust health, but for eight months previous she had begun to suffer from pelvic pain and hadn't been able to sleep, had grown very nervous and had lost 62 pounds in weight, and then weighed 106 pounds (the doctor evidently intended to say that she weighed 112 and not 106 pounds). I examined her and found that the vagina had deepened somewhat. In the meantime the patient had married again. When I operated her she was about 45 years of age; she is now 56. As I say, she married again and the vagina had deepened somewhat, being then about two inches in depth. The cervix had disappeared and there was a dimple at the place where the external os would be. She said that she had had some purulent discharge from the vagina of irritating character, with a bad odor, and that at times she would have considerable discharge and a great deal of pain, almost like a labor pain. I concluded that she must have a collection in the uterus, which emptied itself, due to a stricture produced by previous treatment. I was able to feel what seemed to be the body of the uterus on examination which moved somewhat, but the cervical portion that was attached to the vagina was fixed, and that was as far as I was able to go. I concluded that the trouble was due to the uterus and that it was possible to remove it. I sent her to the hospital, opened the abdomen and after introducing a sponge I took hold of the body of the uterus and moved it preparatory to making an effort to remove it and was surprised to find it break off at the junction of the body with the cervix. I tied it off, removed it and did a cauterization with the Paquelin cautery and closed the abdomen with drainage. She made a good recovery and left the hospital in about three weeks' time. I asked her to come back to see me in order that she might be examined and she did so. At the present time there is no evidence of any further disease in the pelvis. Per rectum there can be felt the remains of the cervix, all of which had not been removed in spite curettage. There was no exudate extending into the broad ligaments and nothing except this condition to be felt. She had improved very much in health, had gained in weight and felt very happy again.

My next experience of similar character occurred about seven years ago when a woman in the early thirties presented herself at my office, complaining of lost health, looking anemic, and stating that she had lost weight. On examination I observed a tumor on the left side of the pelvis, the exact character of which I was not satisfied with. I sent her to the hospital and operated her. It seemed to me that from the time I had seen her at my office until she had reached the hospital and was operated on a change had taken place because when the abdomen was opened there presented before me what looked like a section of a cauliflower, just as perfect as you would cut a section out of a cauliflower, or like a small cauliflower would appear. It happened that Dr. Dickinson was in the operating room at the time. He looked in the pelvis and said, "It's ruptured," as much as to say that that was the end of it. I removed it. She made a good recovery. I had her call at my office at intervals of six months, which she did for a year or two, and then ceased to call. In July, 1914, she was brought to my office by her husband, who said that she was very ill. She was then living in Newark and had been seen by a number of doctors. They decided on operation and were not very hopeful about it and she and her husband decided that, under the circumstances, they wanted me to operate on her. I accordingly sent her to Seney Hospital. After she was in the hospital a week she had a temperature of 103-104 and a rapid pulse. The abdomen had a large mass in it which extended above the umbilicus. She was extremely nervous, was vomiting and anemic; in fact, she was so bad that I kept her in the hospital a week before doing anything. Then feeling that she was going to die anyway I decided that I might as well take a chance with her. I opened the abdomen and found a large cyst on the opposite side which had suppurated. I attempted to remove it and partly succeeded, but ruptured it pretty early in the effort to separate it from the intestines as it was adherent all over to the intestines, although I did make as much of an effort as I thought wise, but gave it up and removed a portion of it and introduced a Miculicz drain and closed the abdomen. It suppurated freely. I think the discharge kept up more or less for two or three months and finally it closed. Following the operation she regained her health. She has visited me at intervals of six months ever since. I saw her this week in order to make sure of her present condition. She weighs now more than she ever did, so much so that I advised her to cut down her diet as I feared she would become so fat that she would be unwieldy. On the right side of the cervix there is a small mass about the size of an English walnut which has been there ever since the last operation. It is not hard, nor is it tender, the uterus is movable and it seems to be simply the remains of the cyst which I failed to remove. The woman appears to be cured.

These two cases represent the type of advanced ruptured papillomatous cysts which we see from time to time.

During the last summer I saw another case which had been aspirated by her physician and a couple of gallons of straw-colored fluid removed from the abdomen. On examination I found a mass in the pelvis. The patient in this case was about thirty-five years of age and had never had any children. I sent her to the hospital, opened the abdomen and found the peritoneum, the entire pelvis on both sides and the intestines covered with a cauliflower-like growth. The condition looked so hopeless that I said to the physician who had referred the case to me. "I don't think there is any use in trying to do anything here and we will simply close the abdomen," and he agreed with me and left the operating room. I began to close the abdomen and then recalled these previous cases and said to myself, "It can't do much harm," and took my hand and scooped out a lot of the growth, and after that I was able to find the ovary on the right side where it had ruptured. The ovary and tube on the left side were curled up and firmly attached and didn't seem to be actively engaged in the process. As the patient's condition was bad, I contented myself with removing the left tube and ovary and closed the abdomen with drainage. There wasn't much oozing. She also made a good recovery. I operated on her last September. I saw her on Tuesday. She has gained in weight and has such a tendency to gain, in fact, that I cautioned her about her diet to be careful against getting obese. That patient is enjoying perfect health.

Within three months I have seen another case in a woman 37 years of age. She had never borne children. She said that for three weeks she had noticed that her abdomen was increasing in size and she wasn't certain whether she was pregnant or what the trouble was. The appearance of the abdomen and the enlargement were so great, being about as large as a seven-months' pregnancy, that my first impression was that she probably was pregnant. She was not pregnant as I subsequently found, for on opening the abdomen I removed a cyst about as large as a seven-months' pregnancy. There was free fluid in the abdomen. There were exudates on the peritoneum. The uterus and the adnexa on the other side were so involved in this case that it was easier to remove the other ovary and tube and uterus en masse. We didn't drain her and she also made a good recovery.

Later than that I was called to see a lady who had been losing weight and was bed ridden and had been vomiting. Two prominent gastroenterologists, one in this city and one in New York City, made a diagnosis of ulcer with probable malignancy of the stomach in that case, and there I found a small papillomatous cyst of the ovary, not larger than an orange, which had not ruptured and there were no exudates. I removed that and since that time she has made a perfect recovery and has been perfectly well. She has been restored to health.

The most impressive thing about these cases, to me, is the fact that after doing such imperfect surgery, such incomplete removal of the diseased tissue that the patient should be so much benefited. The question arises as to what the real character of these growths is that they should be so influenced by such a simple procedure such as unsurgical procedure, if I may say so. As far as I know, no one has undertaken to give any explanation for the great restoration to health which takes place in all these cases. As Dr. Hyde says, they simulate very closely an incision and drainage for tuberculous peritonitis. I would be glad if this crude presentation of these cases would stimulate some discussion about this matter. No doubt, you have all had more experience than I along this line.

Dr. Thomas B. Spence, in opening the discussion, said:

"I do not know whether Dr. Bogart has had the opposite experience in these cases as I have had; that is, very prompt recurrence in some of these cases. They don't all get well; at least, not so many of them get well, in my experience as do the cases of tubercular peritonitis."

Dr. Mathias Figeuira, in discussion, said:

"Did you have the specimens submitted to the pathologist for examination, and have you the report of the examinations?"

By Dr. J. Bion Bogart: "In some of the cases I did. In the case of the patient whose uterus came off in my hands (the one who was curetted) the pathologist reported that it was epithelioma, and the report in the last case examined, the case I spoke of as being diagnosed as a probable cancer of the stomach, was a non-malignant papilloma of the ovary."

Dr. Mathias Figeuira: "In the first case did you have the specimen examined?"

Dr. J. Bion Bogart: "I didn't look up the record and I am not sure whether it was examined or not, doctor."

Paper: "Skin Grafting. A Simplified Method. Lantern Slides."

Roger Durham, M.D.

Dr. Edward J. McEntee, in opening the discussion, said:

"I think Dr. Durham's very interesting paper will make us all think of a most unsatisfactory surgical procedure. I think if we were to go over our skin grafting attempts we would find more failures than we would like to admit. I don't think there is anything which gives the ordinary surgeon more satisfaction than to open up his dressing after his skin grafting attempt and find it has taken. I think there is more satisfaction in that than there is in a primary union.

"My experience, of course, has been, with very few exceptions, with the ordinary Thiersch grafts as we have done them in the past. I have never used novocain in skin grafting. My experience has usually been post-operative, in carcinoma of the breast where we don't have skin enough to cover the resulting wound, and in the cases of extensive burns which we see in the hospital, and I think I have had more success with the ordinary Thiersch grafts with the usual preparation than with any other method. The only other method which I have had occasion to use, and that in only one or two instances, has been the placental membrane and it has been a failure, possibly from faulty technique. We have used the ordinary Thersch grafts at St. Catherine's Hospital and our aim has been, to try to get as healthy a granulating surface as possible, to cleanse the surface of the thigh where the autogenous graft is to be taken from, and then trying to get as fine a shaving as possible. Usually the shaving of the section of skin is rather a delicate procedure. It is much like trying to cut a thin slice off a fresh loaf of bread: first you get a thin slice, then a thick one and so on.

"It is important, in order that the grafts may take, that the patient first be gotten into a good condition of health so as to have a good granulating surface and that the grafts be of uniform thickness and that they be immediately transferred from the razor blade to the granulating surface.

"An important part of the procedure is the maintaining of the grafts in position until the patient can be gotten to bed and kept quiet. I do no think anything is more disconcerting than to do a good grafting operation and find that through the improper handling of the patient in transferring him from the operating room to his bed, the grafts are displaced, thereby rendering the whole procedure a failure. The important question is as to the best method of maintaining the grafts in position and iit has been my custom in skin grafting operations to follow the patient up to the bed to see that he is handled gently in the transferring process and in that way you can frequently get very good results in these cases.

Dr. Royale H. Fowler, in discussion, said:

"Dr. Durham's paper has very many good points, to which I think we can, for the most part, subscribe. His historical resumé was interesting.

"It has been my experience that first one method has been popular and then another. At the present time, and for several years past, I have been using the deep multiple pinch grafts with a great deal of success to which I wish to draw further attention. I think Davis of Johns Hopkins was the first to revive interest in this particular method, and since reading his paper I have used his method almost to the exclusion of the Thiersch method. It is a simple method, rapid of accomplishment and can be very easily done under local anesthesia.

"As regards the pre-operative treatment, it has been my plan to use some mild antiseptic and astringent solution, such as the Thiersch solution or occasionally a red wash solution, which, I think, will well prepare the surface for grafting. We need a clean smooth surface. Curetting is to be avoided.

"As regards the technique of the Revedin method: we use ordinary skin tenaculi, picking up the skin in a cone and snipping it off with a pair of scissors, transferring it directly to the area to be grafted. The grafts are placed about a quarter of an inch apart and narrow strips of gutta percha tissue are placed over the grafted area and the patient is returned to the ward without any dressing except for a cage to protect it. We have found that exposure of these grafted areas to the air works very satisfactorily. If they become too dry or crusted or secretions form, we usually moisten the surface with hot saline for a few hours take off the crusts and express the accumulated secretion beneath.

"I have some photographs here which show the deep multiple graft method. One is a carbuncle of the back of the neck and the other is a varicose ulcer. The one shows the area from which the grafts has been taken and the other the grafted area."

Dr. J. Bion Bogart, in discussion, said:

"I wish to congratulate the doctor for introducing a simplified method of Thiersch grafting.

"I remember having seen one case in my service which Dr. Fowler did with this deep multiple method, rather large sized Reverdin grafts being used in that instance after the method of Davis of Johns Hopkins, in which the result was very beautiful indeed. It doesn't look as well perhaps because the surface is rather uneven. It looks like a street paved with cobblestones. I know one thing that Davis said and that is you can use these grafts and they would adhere and grow on surfaces on which the ordinary Thiersch graft would not adhere. They seem to have more fertility, and he was able to cover the surface nearer the margins which ordinarily it is impossible to keep clean, and even where he had some pus he succeeded by using this method in getting the grafts to adhere. I think that has been found to be the case.

"I arise to call attention to a method that Dr. Fowler's father used on occasion, and that is egg skin, the under lining of the egg covering. I had lost sight of that until some years ago when a gentleman who does his own surgery and does it in a very unprejudiced manner, especially in regard to asepsis, told me of a case that he was treating with the egg skin graft very successfully. I had always been skeptical about it, and he said, 'If you come in some morning I will show it to you.' I went in one day and he showed me a large surface where a man's leg had been burned and where he had made successive grafts of the egg skin. The surface was not clean. It was suppurating freely. He took an egg out of his pocket and broke it and took an instrument out of his pocket, took out some of the skin of the underlining of the egg, put it on the surface and spread it over and said that that was all that was necessary. We returned a few days later and found it had adhered. It covered the surface. I was so much impressed with the demonstration I was getting that I took some pains to sterilize some of my surfaces at the Kings County Hospital. I got very good surfaces and put on the egg skin very nicely. Nothing doing. I gave it up. So if you consider this experience with your own experience where grafts have taken in the most unpromising cases and other cases where they have failed to take when you have been careful of your technique and everything seems to have been perfect, it does seem as though there is some legerdemain about this thing. There is something about it that we do not seem to understand why grafts take in some cases and do not take in others.

"I was very much impressed with the point that Dr. McEntee made about getting a very beautiful grafted surface and what takes place after the patient is removed from the operating room. I think we have all had that experience. I believe his plan of following the cases to the ward is a good one. If he could stand there and watch the case for about ten days he would get even better results."

Dr. Raymond P. Sullivan, in discussion, said:

"About two years ago I presented before this Society a case of complete avulsion of the scalp. The case was also demonstrated before the Clinical Surgical Society. The entire head had to be covered by skin grafts. We were successful and the result was most pleasing and satisfactory. I think Dr. Bogart will recall seeing the case demonstrated at the Holy Family Hospital and he asked at that time why we used such thick grafts. The success of any type of grafting will depend on the ability of the graft to take up the serum from the raw surface and thereby gain nourishment. The after care is most important and any dressing which will prevent disturbance of the graft and at the same time prevent collection of exudate will suffice. An excellent method is to place a cage—as we did in the avulsion case—and avoid contact with the graft. The use of bismuth paste has also proved successful in my hands.

"At the present time, I have a patient at the Holy Family Hospital, who suffered a third degree burn of the left leg from a point about four inches above the knee joint down to and including the dorsum of the foot. The entire skin for this distance was destroyed. Infection occurred. Dakin solution failed, at least our solution called Dakin's did not help us. Finally the infection cleared up and there was a raw surface of the entire leg to be covered. The simplest method I know of was used with a very brilliant result. The thigh was dry and scales of epithelium were rubbed off by a piece of gauze and then dusted over the raw granulating surface of the leg. In one week islands of epithelium began to appear and today there are large patches of firm epithelium growing. We have not operated upon him and he is quickly gaining in every respect. Hence, I have reason to feel that these epithlium islands resulted from the dusting of the dried epithelial cells taken from the thigh."

Dr. Arthur H. Bogart, in discussion, said:

"Most of the work which Dr. Durham has described has been done in the wards of the Methodist-Episcopal Hospital and I can testify to the efficiency of the method. I must confess that when Dr Durham came around with an iodin swab and commenced to paint some of those legs I was a little skeptical about it, but he seemed to be very confident about it and went ahead. He has done most of the skin grafting in our service for a considerable time. In the use of the novocain anesthesia he has had the patience more than I had and he does it very successfully. Since this method of skin grafting has been used the ersults have been as satisfactory as they were, if not more so, due, perhaps, to Dr. Durham's care and technique."

Dr. John E. Jennings, in discussion, said:

"I have used one method which has satisfied me very well indeed, for the last two years, and that consists in the application of oxid adhesive plaster directly over the graft. I think that, on the whole, the greatest number of cases that we see are those where the area involved isn't larger than the palm of one's hand so that this method will give satisfaction, provided the plaster is applied hot so as to stick. It is applied with a few spaces between the strips of adhesive plaster and it can be left on until the end of the week. If by that time the graft has not stuck it never will. I have often applied the adhesive plaster over varicose ulcers. In the cases where larger grafts are required it is impossible to apply this method. It seems to me that the most important point in the preparation of the matter is the field, but with Dakin's solution to fall back upon, not using it too long, and getting the field at the time when it is aseptic and still dry and without any tops on the granulating tissue, it seems to me that one has about as clean a field as one can get."

Dr. Roger Durham, in closing the discussion, said:

"The particular choice of the form of graft does not affect the technique of this line of procedure, whether the Thiersch graft, or the method of Davis, or that of the multiple thick grafts, or the Reverdin graft is used. One can take, for instance, a patient who has just been brought in on the ambulance without any previous preparation and can coat his thigh with iodin and cut grafts with a razor and apply at once to the wounded surface. Or if it is an old wound one can use the previously described simply preparation and apply the grafts to the granulating surface; and then instead of waiting five, to seven days to see if the grafts have taken all right, with this single layer of gauze and a dressing one can see what is going on at all times. Moreover, the secretions, which have apparently something to do with preventing healing, can be washed off and the grafts kept in much better shape for final perfect union.

"The method which Dr. Sullivan has spoken of, in which he took the scrapings from the thigh, I did not mention in the paper, although there is a good deal written about it. It has been tried before and I suppose there is ground for his success judging by the past experiences.

"I think that the simplicity of this method appeals to me more than anything else because it is practical, always universally applicable, and with local anesthesia it is surprising how extensive an area one can graft without much difficulty."

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CRYPTOGENIC POLYCYTHEMIA.*

Case Report.

Raymond Clark, M. D.

Brooklyn-New York.

POLYCYTHEMIA includes those conditions in which there is an increase in the number of red blood cells or in the amount of hemoglobin to the unit of blood volume. In the study of these cases however, one must realize that the increase in erythrocytes may be either relative or absolute. Barker, in his article in Monographic Medicine, says that in his opinion polycythemia should be devided into erythrocytoses and erythremias. This terminology is analogous to our classification of the white blood cells, viz: the leucocytoses and the leukamias. This modern view decidedly simplifies the problem of classifying cases. One has to deal, then, with three groups of classified cases. First, a relative polycythemia in which there is no absolute increase in the red blood cells or hemoglobin but a concentration of the blood due to the reduced amount of blood plasma. This occurs at times after severe diarrheas, profuse sweating, or marked diuresis, also in certain types of peripheral venous obstruction. Second, a true polycythemia in which there is not only an increase in the erythrocytes or hemoglobin per unit volume but a total increase in the body as a whole. This condition may be secondary to certain well recognized pathologic lesions as congenital heart disease, especially atresia of the pulmonary artery, chronic poisonings from arsenic, phosphorous, carbon monoxid and coal-tar products and in individuals that live at high altitudes for considerable length of time. These cases of known etiology are classified as symptomatic or secondary polycythemia. Third, a primary or cryptogenic polycythemia (Vaquez's disease, Oslers's disease) in which a similar relation exists between erythrocytes or hemoglobin and total blood volume as in the symptomatic form but with an unknown cause. This group will undoubtedly diminish in number as research progresses.

PATHOLOGY.

This is extremely sparse, few cases have come to autopsy. However, in those cases reported, the erythropoietic tissue shows a general hyperplasia, red bone marrow is seen where yellow is usually found. When the spleen is enlarged, infarcts, hemorrhages, or cysts are found together with greatly engorged blood vessels. Blood picture—

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*(From the Medical Division, Greenpoint Hospital.)

the fresh blood is usually darker in color than normal and the clotting time is diminished. The hemoglobin varies between 120 and 150 (Sahli). Color index is less than 1. The leucocytes show little alteration from the normal, increased if any. The erythrocytes vary from six to ten millions. The morphology of the blood usually shows polychromasia, occasionally normoblasts, basic staining in the red cells and rarely megaloblasts.

Authorities agree that the erythrocytosis is due to increased production of the red cells rather than to a prolongation of the usual life of the erythrocyte. They are also of one mind as to the increased destruction of red blood cells. Most patients present a deficient oxygen supply or show intoxications whereby the oxygen intake to the body tissues is inhibited, and hence, the increased production of red cells is a compensatory act on the part of the body to overcome the oxygen deficiency.

Case Report.

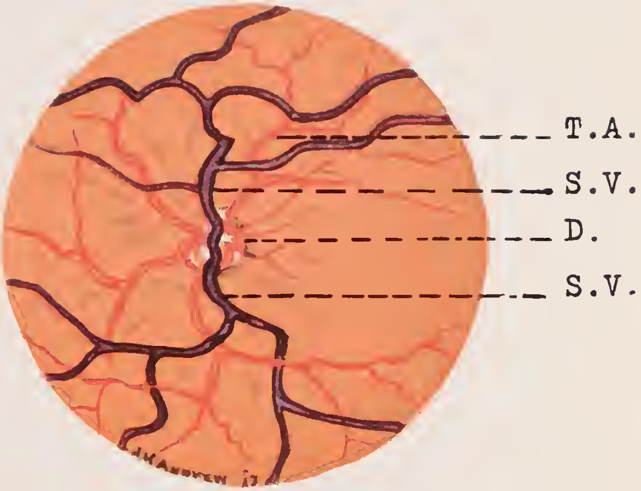
J. W., age 55 years, married, white, laborer, Austrian-Pole.

Family History: Father died at the age of 76 years from senility. Mother died at 63 years of age from cause unknown. No history of tumors or tuberculosis in the family.

P. H.: Healthy as a child and strong as a young man. Denies any venereal diseases. Has been moderate user of alcoholic beverages. Drinks one to two cups of coffee and same of tea daily. His occupation has been mostly in factories, with the exception of six years ago when he worked in a coal-mine for eleven months. At which time he had a severe attack of what he called "asthma". Just before coming to the hospital he was a dish-washer in a restaurant. He has never worked around chemicals. Moderate user of tobacco but denies any drug habit. He has no past surgical history.

P. I.: Onset began six weeks ago when he first felt a general muscular weakness, complained of frontal headaches, dizziness and swelling of his legs, the latter most marked at the end of the working day. The dizziness has been constant since onset. Four weeks ago he began to have dyspnoea, worse during damp weather. Has been confined to the bed for three days before entering the hospital on account of body weakness, fullness in the head and some cough.

P. E.: Patient well nourished and well developed, lying in bed, not breathing rapidly, apparently suffering no acute pain. Mentality is clear. There is a general cyanosis, especially marked about the face and extremities, the cyanosis being of a peculiar dark cherry red. There is no oedema of face, hands, or feet except for a slight pretibial oedema, no ascites. The lymphatic glands in neck and inguinal regions are palpable. The peripheral blood vessels show visible pulsation and tortuosity, moderate sclerosis of the fibro-atheromatous type, pulse is regular and of good volume. Both the superficial and deep reflexes are present and active. The superficial veins throughout the body are overfilled but no varacosities. The peripheral nerve trunks show no hyper-tenderness. The pupils are equal and react to light and distance. The sclera and conjunctiva are markedly injected, the latter being of a deep cherry red color. Ears and nose are negative to external examination save for the peculiar deep cyanosis. Tongue is large, coated, purplish red in color. The oral mucous membrance is of similar hue. Teeth are poorly kept, pyorrhoea is present and ton-



GREENPOINT HOSPITAL
MEDICAL DIVISION

Fundus --- Case of Polycythemia vera, examination by Dr. J. H. Andrew, Jan. 11, 1917.

T. A. tortuous arteries; S. V. central veins and its branches show intense engorgement and a peculiar dark violet red color; D. the disc is indistinct. No hemorrhages or exudate.

sils are injected. Thorax—there is a noticeable inspiratory and expiratory wheeze which calls into action the accessory respiratory muscles. Expansion is equal on both sides, rate twenty-four per minute. Dullness is present at right apex, anteriorly and posteriorly and in the left axillary region above the seventh rib. Hyper-resonence is elicited over both bases posteriorly and lateraly. The expiratory murmur is prolonged and higher in pitch over the dull areas, the hyper-resonant portion shows harsh and prolonged inspiration. Many large, fine, and sibilent rales are heard over the entire chest. The tactile fremitus is generally increased. Heart shows left border 12.5 cm and right border 4.5 cm by percussion from the mid sternal line. The sounds are regular as to rate and rhythm, the valvular element predominating, no murmurs are heard. The pulmonic second is accentuated. Abdomen—this is moderately distended and percussion note is tympanitic, no muscle spasm, no masses. The liver is enlarged, tender along the whole free border and measures 15 cm in the mid clavicular line. The spleen is not palpable. Genitalia are normal. Opthalmoscopic examination by Dr. Andrew shows right eye, arteries tortuous, tendency to silver wire effect; superior and inferior central veins, together with their branches, are markedly swollen and have a peculiar dark violet red color. The disc is indistinct. There is no hemorrhage or exudate. Left eye is similar to the right. Blood pressure, systolic 160 Hg mm, diastolic 110 Hg mm.

Laboratory Data.

Routine urine examination December 19, 1916. Total in 24 hours, 72 oz.; clear amber, sp. gr. 1026, albumen moderate, no sugar, no indican, usual leucocytes, epithelial cells and mucus, no crystals, few hyaline and granular casts and some amorphous urates.

Phenolsuphonephthalein test Dec. 21, '16, total intwo hours 20%.

Blood Examinations.

Date	Hemoglobin	Erythrocytes	Leucocytes
Dec. 20, '16	134 (Sahli)	5 800 000	5 500
Dec. 21, '16	136 (Sahli)	6 200 000	
Dec. 22, '16	134 (Sahli)	5 980 000	7 000
Jan. 3, '17	138 (Sahli)	6 290 000	6 400

Differential Leucocyte Count.

Date	Polymorph	S. lymph	L. lymph	Eosinophiles	Basophiles
Dec. 20, '16	79	16	5	0	0
Dec. 22, '16	77	12	11	0	0
Jan. 3, '17	50	26	24	0	0

Coagulation time is two minutes (Biffy-Brooks). Centrifuged equal volumes of blood as compared with normal shows one-third greater total solids. Morpthology of fresh blood-stained smears shows polychromasia, some basic staining of the red cells, but no nucleated erythrocytes. Chemical blood examination by Dr. Klein Dec. 18, '16, shows urea nitrogen 30 millegrams per 100 cc blood and creatinin 3.5 milligrams per 100 cc of blood. The carbon dioxide combining power of 1 cc blood plasma is .8 cc. The Carbon dioxide alveolar air tension is 45.

Wassermann reaction (long) is negative.

BLOOD ANALAYSIS AND FUNCTIONAL ACTIVITY OF KIDNEYS.

By Dr. Cyrus W. Field, Jan. 25, 1917.

Weight, 139 lbs. 63 kilos. Red cell volume, 62%.
Passed in 60 minutes, 63 cc of urine; equivalent to 1512 cc in 24 hours.
Urea concentration in this urine, 13.9 grams per liter.
Urea daily output at this rate, 21 grams.
Urea concentration in the blood at mid-period, .270 grams per liter.
McLean index 152%. .065 Ambard's coefficient.
Creatinin, .2 milligrams per 100 cc blood.
Uric acid 2.7 milligrams per 100 cc blood.
Sugar 102 milligrams per 100 cc blood.
Carbon dioxide absorption capacity of blood plasma, not enough to test.
Acidity of urine in terms of N/10 acid per liter, 450.
Ammonia Urine in terms of N/10 acid per liter, 320.
Acidosis coefficient 22.4.
NaCl concentration in this urine 12.5 grams per liter.
NaCl daily output at this rate 20 grams.
NaCl concentration in plasma at mid-period; calculated 6.14 grams
NaCl concentration in plasma at mid-period: found 5.30 grams per
per liter.
Normal threshold, 5.62 grams per liter.
Threshold in this case 4.78 grams per liter.
Lab. No. 2850.

X-RAY EXAMINATION BY DR. HOUGHTON

Radiogram of the heart shows left border 11 cm, right border 5.5 cm from mid-sternal line. General outline of shadow is irregular and much enlarged. Fluoroscopally, the position is high in the chest with some shortening of ascending aorta. The expansion of the left ventricle is less than normal. The propulsive wave, passing from above downward, apparently at an irregular rate of speed. The auricular appendix is visible. The left border of the pulmonary artery is markedly displaced to the left. The excursion of the aortic arch is excessive. The right border of the superior vena cava is displaced to the right.

The lungs show general increased density on the left side with abnormally marked bronchial shadows. Two calcified areas are seen in the left lung. The diaphragmatic shadow is irregular especially on the right side.

COURSE IN THE HOSPITAL

Patient was admitted to the medical division December 17, 1916. He did not present the usual dypnoea and restlessness that usually accompany a marked cyanosis. The temperature was 98.8, pulse 110, respiration 30. The next day after admission he developed coarse mucous rales throughout the chest and his breathing was labored. The pulse rose to 118 and temperature to 100°. He was given calomel grs V and pulv. Jalap comp. grs V, followed by sulphate of magnesia. As a cardio-vascular stimulant he received Tr. Digitalis m. v q. i. d., together with potas. iodid. grs X t. i. d.

December 20, 1916, patient resting quietly and the lungs show only a few rales. The cyanosis is still marked.

On the fifth day after admission temp. fell to normal where it remained for the rest of his stay in the hospital, the pulse to 80 and respiration to 24.

It is regretable that no estimation was made of the amount of urobilin in the urine and blood and also no test for determining the total blood volume.

At the time of discharge from hospital, the headaches, dizziness, dyspnoea, and pretibial oedema had disappeared and there was a better muscular tone. The cyanosis had cleared, save for a dusky appearance. Discharged, February 9, 1917, improved.

STREPTOCOCCUS OR SEPTIC SORE THROAT.

John M. Taylor, M. D.

Brooklyn-New York.

IN recent years, so recent that even in the latest edition of our textbooks no mention is made of them, there have sprung up in certain localities, epidemics of what has been called streptococcus or Septic Sore Throat.

Before its appearance in this country in 1912, several small outbreaks, seventeen in number were recorded in England in as many different localities, and in a few of these careful bacteriological investigations were made to determine the cause.

In 1903 the streptococcus pyogenes was first detected in suspected milk in an epidemic at Guildford.

In 1904 the streptococcus was first demonstrated in cultures obtained from the throats of those attacked in an epidemic at Finchley, where 550 persons were attacked.

In 1905 the streptococcus was found both in the throat exudates and in the common milk supply of the 600 victims of an epidemic in Colchester.

In 1908 the same organism was recovered from the throats and from the milk supply in an epidemic in Christiania, in which 548 persons fell a prey to the disease.

In 1912 and 1913 three large and alarming epidemics occurred in this country.

In Boston about 1400 persons were affected and over a thousand of the cases were investigated.

In Baltimore about 1,000 were stricken and in Chicago the total number was estimated to be over 10,000.

These epidemics, unlike those of influenza, did not spread throughout the country, but were confined to a single community. They were also characterized by the very sudden appearance of a large number of cases, often several members of a family being taken ill at the same time, suggesting a common source of infection rather than dissemination by personal contact.

The American epidemics were very carefully studied from a bacteriological point of view and in each city the infection was definitely traced to a single milk supply. The sore throat cases traced to *one* dairy made up 70 per cent of the total in Boston, 65 per cent in Baltimore and 72 per cent in Chicago. The number of secondary cases developed by contact were comparatively few.

In all three of these epidemics a streptococcus was isolated from throat cultures and from the peritoneal exudate in some fatal cases. This streptococcus had certain definite peculiarities. Davis compared cultures from each of these three great epidemics and found them practically identical. The organism is a peculiar type of hemolytic streptococcus, having a distinct capsule and forming large moist colonies when grown on blood-agar.

While the source of infection was very clearly traced to the milk supply, it was not quite so easy to trace the way in which the milk itself became infected.

In some cases there was a definite mastitis in one or more of the cows in the herd supplying the milk. In some cases this could not be demonstrated. In some cases the milkers of the cows were suffering from streptococcus sore throat. In other cases other employees, who handled the milk, were suffering from it. So the question arises as to whether the milk becomes infected by the cow, suffering from a streptococcus mastitis or by contamination from the milker or other employee handling the milk.

While it is possible that milkers and employees suffering from streptococcus sore throat may occasionally infect the milk, the investigations of Rosenow and Davis seems to indicate that this was the unusual way. Their researches showed that, as stated above, in *some* cases the infection of the milk was caused by a mastitis in one or more cows in the herd, a mastitis that was very evident to the investigator. In the Chicago epidemic there was an unusually large number of cases of mastitis in the cows furnishing the incriminating milk. But Davis showed that a streptococcus mastitis could exist without any evident caking of the bag and might very easily escape detection. Beside that Rosenow showed that the udder of the cow occupies about the same hospitable relation to streptococci as the tonsil does in man, both harboring members of the two groups of streptococci, streptococcus viridans and streptococcus hemolysans, that these are practically always present and capable of acquiring virulence under certain conditions in the same way as streptococci from other sources. It was also shown that by artificial cultivation and inoculation into animals, it is possible to transfer the non-virulent strains of non-hemolyzing streptococci into virulent hemolyzing streptococci, having a capsule and forming large moist colonies on blood-agar like the strains from epidemic sore throat.

This theory was later confirmed by the investigation of an epidemic at Cortland and Homer in New York State in 1914, in which by means of a centrifugal milk clarifier, the peculiar organism of this disease together with pus corpuscles in large amounts, definitely traced the outbreak of the disease to two cows in a herd, which had been supplying milk to 70 per cent of the cases in this epidemic.

A bacteriological study of an epidemic right near home, in Rockville Center, Long Island, in June, 1914, also demonstrated that of 232 cases 205 obtained their milk supply from one dairy and the infection was definitely traced to one udder of one cow.

The lesson to be learned from this is that as milk gives rise to these epidemics of sore throat and its complications by being the vehicle of virulent streptococci, it is reasonable to suspect that it frequently may be the means of transmission in single and scattered cases of various streptococcus infections.

Clinical Features.

In regard to the clinical features of Septic Sore Throat:

The onset is abrupt, characterized by chilliness or a distinct chill, general muscular soreness, a dull headache and in some cases nausea and vomiting. Very soon there appears an intense hyperaemia, a diffuse congestion of the throat and the patients complain of pain on swallowing. There may or may not be a grayish exudate. If there is, it appears within a few hours, occurring either as one large exudation or as discrete patches on the tonsils and pharynx, often simulating a diphtheritic membrane. The temperature runs high and the luekocytes are increased in number. The prostration in most of the cases reported is extreme and very marked from the outset. The pulse is often but not always relatively slow. Enlargement and tenderness of the cervical lymph glands is a characteristic symptom.

The temperature subsides in two or three days and then in mild cases the patients complain only of weakness and lassitude for several days more and then recover. Frequently, however, within a week or ten days a second attack of sore throat sets in marked by swelling of the tonsils and cervical glands. The edema at times is so great that it is impossible to swallow liquids or saliva. The disease varies from a very mild type to one of intense severity accompanied with complication and numerous fatalities.

Complication.

In regard to complications:

Peritonsillar abscess or suppuration of the cervical lymph nodes is comparatively uncommon. When they do occur and are drained they usually hasten to recover.

In unfavorable cases the germs invade the blood stream and give rise to numerous complications.

I have the statistics of 173 typical cases in the Chicago epidemic, in which a careful record was made. It shows that suppuration of the cervical glands occurred sixteen times and peritonsillar abscess eight times. There were six cases of Otitis Media, four of conjunctivitis and eleven of bronchitis. Arthritis was a common complication being present in seventeen cases. A skin eruption was noted in seven cases, four resembling erysipelas, the other three being of a purpuric nature. Broncho pneumonia was found in eight patients and often led to a fatal result especially in old people. Pleurisy was observed three times. Nephritis occurred in five cases. Five cases showed endocarditis.

One of the most peculiar and dangerous complications is peritonitis, which is responsible for many deaths. There were nineteen fatalities in the above series of 173 cases. The cause of death in nine of these was attributed to peritonitis, in four to pneumonia, in three to endocarditis and in three to septicemia.

Diagnosis

The diagnosis of this condition is based upon its occurrence in epidemics with a sudden outburst of many primary and few secondary cases, its abrupt onset with high temperature and marked congestion of the throat and extreme prostration. It is most likely to be mistaken for diphtheria. Cultures from the throat show the absence of the Klebs Loeffler bacillus and the presence of the characteristic streptococci.

Treatment.

The researches into the causation of this disease point the way to the prophylactic treatment and to the means for preventing other large epidemics and cutting short those once started.

Inasmuch as milk may become infected by a mastitis in a cow, which does not manifest itself by a caked bag, pasteurization of all milk seems indicated as well as elimination of chances of infecting the milk later by those handling it, who may be suffering from a streptococcus infection of the throat.

In regard to the treatment of the disease itself, the various complications receive their appropriate treatment. In so far as I have been able to find out there is no positive way of preventing these complications and no specific treatment for the disease. Antogenous vaccines and stock vaccines have been recommended and endorsed, but in such a severe acute infection it would seem as if they were contraindicated at least in the acute stages.

Leucocyte extract has been recommended as of value. Leucocyte extract is prepared by inciting a purulent exudate in the pleural cavities of rabbits and making a sterile extract from the centrifugated leucocytes. Studies of its action have been made by Hiss and Zinsser. What action it has is most probably due to poison-neutralizing or destroying bodies, which act on the endotoxins, and thus relieve the leucocytes from fatal poisoning and protect the higher cells so that their functions are not damaged. Apparently, however, this new product is still in the experimental stage.

Cold compresses to the troat to relieve pain and edema are indicated and cold sponge baths for reduction of high temperature and for their stimulating effect.

The indications then are to treat a severe sore throat, with high temperature and marked septic poisoning, to try to prevent as many complications as possible and to treat those that do occur.

CONSTIPATION.

Martin L. Bodkin, M. D., F. A. C. S.

Brooklyn-New York.

CONSTIPATION may be defined simply as the slow movement of the digestive residue or the fecal mass through either the small or large intestines, or a relatively insufficient daily evacuation. There is seldom any interference with its progress in any portion of the small intestine because of its liquid condition. As the chyme travels from the duodenum towards the large bowel it gradually becomes more solid until it reaches the cecum, where it is fairly firm and moves slowly.

Etiology—Constipation is due to many causes commonly associated with diet faults and habits.

The Motor Activity of the intestine may be lowered as would occur with constitutional disorders and protracted fevers.

Over-distention of the bowel with gas, the result of fermentation, will, in some instances, stretch and weaken the muscles of the intestine.

When *insufficient food* is taken there is not sufficient residue to be evacuated within the ordinary limits of time, and an apparent constipation exists.

In others the *natural stimulants* contained in the food residue are not in sufficient quantity.

The skin and kidneys during exercise excrete so actively and profusely, particularly during hot weather, that a *deficiency in the bodily* supply *of water* may exist.

Over-activity of the Motor Centers is apt to produce constipation alternating with diarrhea, and the condition known as mucous colitis results.

A Disorder of the Inhibitory Nerves, which are from the sympathetic system, may produce constipation, or it may result from a disease of the motor nerves, producing and enterospasm (spastic constipation).

Congenital Kinking of the Sigmoid, due to its excessive length compared to the other portions of the colon, a condition found in children before the age of 5 or 7 years.

Persons suffering from *weak abdominal muscles,* the result of disease; have not the power to compress the intestinal contents sufficiently to give the needed aid to expulsion.

Incomplete Membranous Occlusion of the anus and organic stricture of the rectum in the form of malformations which may only partly obstruct the rectal or anal canal.

An Incomplete Invagination of the sigmoid or rectum may be the cause of an insufficient evacuation of the bowel contents.

Congenital Idiopathic Dilatation of the colon (Hirschsprung's disease) may be the cause of an apparent constipation.

Obstruction to the normal movement of the bowel occurs from cancer, stricture, tumors within the bowel and pressure from neighboring organs.

Painful Affections, such as fissure in ano, thrombotic piles, prolapse of the rectum, congenital narrowing of the rectum or anus, or stricture, the result of catarrhal proctitis, may cause obstipation. Any of these conditions may cause retention from fear of pain at defecation.

TREATMENT—Children suffering from constipation should be taught at the beginning of the sixth week to move the bowels while on a suitable receptacle. Infants at that age, as a rule, have a bowel movement after the second feeding, and the habit encouraged then will prove of great benefit later. Older children should receive strict observation and be forced to attend to a daily evacuation. Adults, likewise, should be taught to understand that the same principles apply to them.

Constipation being a term used to indicate the relative slow movement of the fecal contents, the treatment is necessarily indicated by the symptoms of auto-intoxication, digestive disturbances and anemia which accompany this deficient physiological function. Authentic statistics refute the opinion that a daily evacuation of the bowel contents is necessary to perfect health in all adults, as cases are on record in which individuals have had only weekly movements of the bowels without interfering with the general health in any way. These facts would direct the treatment to relieving the condition only when constipation has interfered with some of the healthy bodily functions and should be governed by individual treatment.

Enemata and suppositories, consisting wholly or in part of soap, as given children most frequently, are a common cause of proctitis. The daily enema, or suppository of soap, should be condemned. In cases due to a kinking of the sigmoid flexure a daily enema is the best method of emptying the bowel, but care should be exercised to have it consist simply of water. In giving an enema for this purpose an ordinary piston syringe should not be used, as the sudden injection of the fluid into the rectum tends to empty it at once, leaving the mass high up unaffected. A small catheter attached to a fountain syringe will gently carry the water into the rectum and allow it to advance into the sigmoid without expulsion. The fountain syringe should not be held higher than a foot or two above the body so as to avoid too much force.

The use of magnesium sulphate and calcined magnesia are very valuable for temporary use in children, when added to the bottle food. Strong purgatives, such as aloes and the mercurial preparations, are so irritating to the mucous membrane of the intestine that their continuous use for constipation should not be encouraged. Castor oil, owing to its after constipating effect, is only harmful in these cases.

The use of the ordinary drugs for constipation, such as cascara, podophylum and senna, are to be recommended as secondary to a general line of treatment relieving the condition if possible, and arising from some definite cause. The combinations of these drugs are so well known and commonly put up that their special prescription need not be mentioned.

Deficient motor activity is probably dependent upon a constitutional disease and is theoretically classed as such. Persons suffering from febrile diseases for short periods, due to this cause, are best relieved by the well-known and agreeable laxatives. During long periods of illness, in which it is fair to presume that the depression due to the disease has caused motor inactivity, a combination of the alkaline laxative treatment with rhubarb, cascara, calomel and muscular tonic treatment is best left to the judgment of the physician in charge.

When constipation is due to hypertrophy of Houston's valves, valvotomy is indicated and may be accomplished with the clips made for that purpose.

Constipation, obstipation and fecal impaction are in many instances due to the same cause and only represent different degrees of intestinal incompetency, so that fecal impaction and obstipation are subject later to the general treatment and investigation as applied to constipation.

Entero-spasm (spastic constipation) is probably the symptom of an existing mucous colitis, more common in a mild degree than is accredited. The treatment should be along that line and efforts made to control the catarrhal inflammation, which may involve the entire digestive tract. Olive oil and castor oil to regulate the bowels and occasionally belladonna to control the spasm in the intestine, combined with tonics, should be the general treatment of these cases.

As much of the intestinal activity is due to chemical stimulation produced by the digestion and decomposition of food, vegetables are of much more value than meats. Fats and their derivatives, glycerin, fatty acids and soaps, are powerful stimulants. So that in an attempt to remedy a deficient amount of digestive residue necessary to stimulate the normal intestinal peristalsis, the diet is of great importance, as the bolus of undigested material or chemical stimulants is necessary to excite peristalsis. Organic acids, produced in the intestine by the fermentation of the carbohyrates contained in vegetable foods, stimulate peristalsis. Cellulose of which vegetables largely consist, is also a potent mechnical stimulant of peristalsis, and passing through the intestinal canal without undergoing absorption or decompensation, thus serves this purpose. Fecal matter which accumulates in the colon in small quantities, the result of abnormal assimilation and digestion, in some instances will not produce effective stimulation to peristalsis, and auto-intoxication may follow from the extreme delay in the intestinal canal.

Recent experimental investigations have proved that the cellulose contained in different vegetable matter is not acted upon by either the gastric or intestinal digestive ferments and does not undergo absorption or decomposition. Schmidt and Neville Wood have brought the subject practically and forcibly to the attention of the medical profession by their excellent work in this direction. Schmidt suggests the use of agar-agar, and both recommend the use of paraffin. In Germany bread made from wood shavings has been advocated for this purpose. Agar-agar is slightly affected by bacteria, but since it is composed largely of hemi-cellulose it may be readily substituted instead of a large vegetable diet. Agar-agar may be administered in the ordinary dose of one tablespoonful in mashed potatoes or stewed apples. This dose may be increased, if necessary, to half an ounce which should be divided between the different meals. The combination of cascara with agar-agar is sold under the name of regulin. Hertz relates an apparent toxemia due to the administration of agar-agar for the relief of constipation and attributed the toxic effects to the bacterial growth in the agar-agar which forms an excellent culture medium. Liquid paraffin is so disagreeable to the taste of some patients that a few drops of some aromatic oil may be mixed with the dose to be taken. The ordinary dose is from one to six drachms a day.

Strychnine acts in a general way upon the peripheral and central nervous system and is particularly indicated in those forms of constipation which are dependent upon a depression of the central and peripheral nervous system. It increases the tone of the muscular coats, probably by a stimulation of Auerbach's plexus, causing a stimulating diet or purgatives to be more effective.

Atropine decreases excessive peripheral nerve excitability and tends to a regular peristalsis in cases of mucous colitis or entro-spasm. Its value is limited to such cases and it proves of little use in other forms of constipation which are due to different causes. The pain accompanying entero-spasm due to lead poisoning, in which there is an rritation of the vagus, is relieved by its effect upon the nerve ends. In these cases atropine does not assist the evacuation of the bowel so that a purgative should be administered at the same time.

Vegetable purgatives, such as aloes, senna, cascara, and rhubarb, owe their purgative action to an irritation of the motor-nerves from the anthracene compounds which they contain. Aloes takes from ten to twelve hours to act upon the bowels and is considered one of the slowest of the vegetable purgatives. In my experience aloes is a positive irritant to the rectum, and the same may be said of podophyllum, senna, and the resinous-bearing purgatives in general. Their use should be avoided if possible when hemorrhoids, fissure, proctitis of any irritation of the rectum, due to other forms of disease, exists.

Cascara sagrada is probably the best drug for constipation when it is necessary to continue medication. It should be combined with strychnine and when used for a long period should be alternately given with aloes, senna or podophyllum. This drug seemingly irritates the colon and rectum less than any of the other vegetable purgatives excepting rhubarb. Rhubarb, owing to its astringent after effects, should not be used for the relief of constipation.

Castor oil, which is split into glycerine and recinoleic acid by the pancreatic juice, is not indicated in the treatment of constipation, owing to its after constipating effect, excepting when the condition is due to hypertrophic catarrhal colitis, senile constipation and spastic constipation.

Saline Purgatives. The commonly-accepted theory of the action of saline purgatives has been proven by the experiments of Hertz to be erroneous. He has found by X-ray investigations that a saline purgative given before a meal reached the cecum, in combination with bismuth oxychloride, in four hours, but the subject had emptied the bowel two and a half hours earlier, supposedly from the purgative. That the purgative had not traveled faster than the bismuth was proven by observation on two patients with fistulae at the end of the ileum. The greater part of the purgative was found in the stool next day. The only explanation possible was that the salt had been absorbed from the smaller intestine and acted from the blood on the neuro-muscular apparatus of the colon, producing increased activity of the motor and secretory mechanism. Saline purgatives do not enter the duodenum until they have become isotonic with the body fluids by dilution with the secretion of the gastric mucous membrane (Hertz). Absorption then takes place from the duodenum into the blood, so that the administration of saline purgatives should be recommended before meals, while the stomach is empty, to facilitate its rapid absorption. The analysis of urinary excretions shows that about one-half the quantity of saline purgatives is passed off by the kidneys. Salines empty the colon without interfering with digestion in the small intestine or stimulating muscular activity.

In combination with the vegetable purgatives very excellent results can sometimes be gotten if the bowels are forced to a habitual evacuation after breakfast by injecting about eight ounces of cold water. The water stimulates an immediate movement of the lower bowel which may be followed after a few days' treatment with a regular movement. This cold water treatment is necessary each day for a period of not less than two weeks, but may, if needed, be carried on for a longer time at intervals of every other day.

HISTORICAL SKETCH OF PHYSICIANS WHO LOCATED IN THE SOUTHERN BROOKLYN SECTION, SOUTH OF THIRTY-NINTH STREET IN THE LATTER PART OF THE NINETEENTH CENTURY.

(Only those physicians are considered who removed from the neighborhood or who consummated their life work by retirement or death.)

Robert E. Coughlin, M.D.

Brooklyn-New York.

IN the early seventies an ex-army surgeon located in the brick row on the east side of Third Avenue between 41st and 42nd Streets. His name was Hazard and he practiced his profession in this neighborhood for about four years, from 1874 to 1877. Nothing more is known about him.

In 1878 Dr. W. Scott Smith put his shingle out and practiced in Dr. Hazard's office, 4115 3rd Ave., where he remained till the year 1884. He was a graduate of the Long Island College Hospital and it is said that he removed to New Jersey.

In January, 1882, Dr. Jeremiah D. Phelan, Sr., formerly Hospital Stewart, U. S. A., located at 314 Thirty-Ninth Street. He was a graduate of the College of Physicians and Surgeons in the year 1875. He was a very successful general practitioner of medicine and was honored and beloved by all his patients and the community in general till his death in the year 1888.

In 1884, Dr. Louis E. Preble located in the red brick row on Third Avenue. He had graduated from the Long Island College Hospital the same year. He practiced till 1889 when he died very suddenly from pneumonia after making a night call.

In July, 1884, Dr. George H. Parshall opened up an office at 273 Fifty-Third Street, this being the new number. He also graduated from the Long Island College the same year. Before his retirement a few years ago he was elected to the State Assembly on the Republican Party ticket. He was also Medical Examiner in the Post Office Department in Brooklyn.

In March, 1887, Dr. William Armstrong Fries located at 46 Street and 4th Ave., the present site of The Norwegian Hospital. He was the owner of this valuable piece of property at this time. Before coming to Brooklyn Dr. Fries had practice in Pennsylvania. He graduated from the University of Pennsylvania, Medical Department in the year 1872. He is said to have been the first one to combine asbestos with cloth fabric. This patent he sold outright to The Johns Manufacturing Company. Dr. Fries also wrote a book entitled "How to Live" in the year 1915. He retired from practice in the early part of the present year and is now devoting his whole time to institutional work along medical lines on Staten Island.

In April, 1887, Dr. Joseph Wells began the practice of his profession at 341 Fifty-Second Street, where he remained till June the same year. He had graduated from the Jefferson Medical College. His death occurred from heart disease a number of years after his removal to Clinton Street, down town.

In December, 1889, Dr. George Chaffee began the practice of medicine in this neighborhood in the red row on Third Ave., between 41st and 42nd Streets. He had graduated from the University of Michigan in the year 1881. Dr. Chaffee was born in Warren Centre, Pa., Sept. 17, 1855. Before coming to Brooklyn he had practiced medicine in the west and in Pennsylvania. He was the founder of the New York and New England Association of Railway Surgeons which was organized October 27th, 1891, in Bensonhurst-by-the-Sea (Hotel Bensonhurst). Twenty-four surgeons from all over New York State composed the charter members. Dr. Chaffee was also founder of the proposed Bay Ridge Hospital. He was Railway Surgeon to the Brooklyn City Railroad in 1891 and the Long Island Railroad from 1889 to 1891. In 1894 he secured the appointment as teacher in intubation at the New York Polyclinic, having been taught under O'Dwyer, who invented intubation. He also worked under Wyeth and read and published many papers dealing with intubation, general surgery, railroad surgery, expert testimony, transportation of patients, etc. Dr. Chaffee was a Republican in politics and an ardent supporter of Ex-President Roosevelt. Owing to ill health he was compelled to give up general practice in 1916, when he removed to Little Meadows, Pa., where he is now enjoying the life of a retired gentleman farmer.

In 1888, Dr. John H. E. Sands opened an office at 253 Fifty-Fifth Street where he remained till 1891 when he removed down town where he is now residing on Ninth Street.

In April, 1890, J. Barney Low commenced to practice in this locality where he remained till 1893. He was a graduate of Howard University, '81, and is said to have removed to New York.

In July, 1890, J. George Sauer located at 4103 Third Ave. (opposite the red brick row) where he remained till 1891 when he also removed to New York City. He had graduated from the P. and S. College in 1887.

In 1890 a physician named Hoyt Hunt located at 363 Forty-Eighth Street where he remained a few months.

In 1891, another physician located in the red brick row, 4117 Third Ave. He had graduated from the College of Physicians and Surgeons in the year 1878. His name was Daniel Waldo. He was very well liked and much esteemed up to the time of his sudden death in the year 1893.

Our late Officer of the Port of New York, Dr. Joseph J. O'Connell, graduated from Long Island College Hospital in the year 1887. He served two years in St. Mary's Hospital as interne and opened up his office at 314 Forty-Fifth Street in April, 1892. He had secured an appointment as Examiner in Insanity at the Kings County Hospital. This position he held up to his appointment as Officer to the Port. He had a large lucrative practice and was always very much interested in politics. He was very popular and had a host of friends. He was a man with great executive ability which came to his aid when he undertook the building up of his department soon after he was appointed. Dr. O'Connell was the last appointee under the control of the State. He did remarkable work for the State and died in office in the year 1916. We may say without question that Dr. O'Connell spent his best years as a practitioner of medicine in the Bay Ridge section.

In April, 1892, Dr. Richard Platz located at Forty-Sixth Street and Third Avenue. He was a graduate of the Long Island College. He remained until Sept., 1893, when he removed to Sullivan County, N. Y., where he died in 1895.

In June, 1892, Dr. John C. Hartt began to practice his profession at 314 Forty-Fourth Street. He had graduated from the Long Island College the same year. He was an examiner for the Metropolitan Insurance Company and Physician to the Wild West Show when it had such a long run at Thirty-Seventh Street and Third Avenue. Dr. Hartt built up a large practice and was a hustling busy practitioner, who loved work as well as play. He was killed while riding a high-strung horse, the gift of his friend, the late Col. William Cody, in November, 1901.

Dr. A. H. Steibling of 354 Forty-Sixth Street practiced at this address in the year 1893, from May till June, when he removed to New York.

After graduating from the New York University in the year 1894, Dr. W. H. Muchmore opened up an office at 422 Fifty-Sixth Street, where he practiced his profession up to the time of his death a few years ago. Probably no physician ever built up such a large practice in this section. It was often remarked that Dr. Muchmore was on the go day and night. He never took a vacation and never believed in it. Pneumonia after a few days' illness was the cause of his death.

Dr. William Penny, a graduate of the University of Louisville in the year 1872, began to practice medicine in this neighborhood in July, 1894. Dr. Penny was Prof. of Physiology in the Texas Medical College as well as Surgeon to the Galveston Hospital. He died about two years ago.

Dr. T. H. Fisher came to southern Brooklyn in Nov., 1894. He had graduated from the New York University in the year 1889. He was medical examiner for different steamship companies and was a busy practitioner. He died about five years ago.

Dr. N. J. Crosby located at 321 Fifty-seventh Street in April, 1895. He was a Long Island College graduate of the same year. He removed to parts unknown in Sept., 1895.

In May, 1895, Dr. Edward F. Morgan began the practice of medicine in our neighborhood at 192 Fifty-Seventh Street. He was a graduate of the Jefferson Medical College in the year 1879. He removed to 222 Seventeenth Street and later in 1900 returned to 514 Forty-seventh Street where he died in Aug., 1901.

At 4714 Third Avenue, Dr. W. J. Loomis, a graduate of the N. Y. Eclectic School, year of 1896, practiced medicine from June of that year to July, 1898, when he removed to East New York.

In the same year Dr. V. E. Geyer practiced medicine for a few months at 251 Fifty-Second Street.

In the following year Dr. John T. Deyo, a graduate of New York Homeopathic Medical College ran a private dispensary, where he charged, at Forty-Sixth Street and Third Avenue. His stay was very short, about three months. In the same year (1897) Dr. Carl E. Lundgren opened an office at 430 Fifty-First Street. His stay also was very short, from March till May, when he removed down town. In the same year Dr. J. A. Wooley located at 416 Fifty-Fourth Street. In 1899 he removed to East New York. During the same period Mrs. Walton Keys, a graduate of the Eclectic College of Ohio, practiced, her address being 352 Fifty-Second Street.

In March, 1898, Dr. T. C. Guenther, previously an interne at the Norwegian Hospital and a graduate of the University of Michigan, opened up an office at 423 Forty-Eighth Street. He practiced his profession till about 1904 when he removed down town.

In June, 1898, Dr. Harrison C. Allen opened an office on Forty-Seventh Street and later at 424 Fifty-Fourth. He was a graduate of New York University, class of 1897, and practiced his profession up to about one year ago when he removed to Tuxedo Park, N. Y.

In June, 1898, Dr. William Armstrong Fries, Jr., opened an office in the red brick row on Third Avenue. His address was 4113 Third Avenue. He had graduated from the Long Island College the same year and had performed service on the U. S. Hospital Ship, Missouri Medical Supply, Havana, Cuba. He died after a lingering illness in April, 1901.

In the same year Dr. W. S. Balken, a graduate of the College of Physicians, located at 437 Fifty-Fourth Street where he remained till Sept., 1899, when he removed.

Still another practitioner commenced practice in the year 1898, Dr. Ralph J. Lloyd of 440 Forty-Seventh Street, began the practice of his profession in general medicine in December and continued till July, 1901, when he removed down town.

In June, 1899, Dr. Thomas E. Barry opened an office at 362 Forty-Eighth Street where he practiced till October of that year when he removed to parts unknown.

In November, 1899, Dr. P. F. Hogan, a graduate of Michigan University, located at 472 Fiftieth Street. He died about one year ago. His son, Dr. George Francis Hogan, a graduate of the Long Island Hospital, is at the present time an interne at the Norwegian Hospital.

In Feb., 1900, Dr. E. W. Steckler located at 415 Forty-Ninth Street. He removed in April of the same year.

Dr. Charles Walsh opened an office at 437 Fifty-fourth Street in Oct. 1900, where he remained until Jan. 1902.

In the outskirts we must not forget pioneers in the practice of medicine as for example, Dr. DeMund, Sr., whose practice extended throughout what is now known as the 30th and 31st Wards. Many times he would have to get out of his rig and shovel snow to make a pathway to his patients. Also John O. F. Hill, M.D., who lived at Neptune Avenue and Courtland Street, Coney Island. Dr. Hill was a veteran of the Civil War and was well thought of throughout the Gravesend section as was Dr. Stephen C. Pettitt, who lived on Neck Road and who lost his life through infection two or three years ago. In 1899, Dr. Sigmund Beck located at 2757 Henry Street, Coney Island. He specialized in diseases of children and was quite successful. He was an active citizen and was always in the front of every movement for civic betterment. He was attending pediatrist to the Coney Island Hospital and the Bay Ridge Dispensary. Dr. Beck was born in Hungary and came to this country when a child. He graduated from the New York University in the year 1892 and won the Mott medal for careful anatomical notes. He died April 22, 1917.

In the Bay Ridge section Dr. Stephen Keyes located in the early '90's where he continued to practice his profession up to the time of his death.

Dr. Edward McCarthy of 209 Sixty-Seventh Street started to practice his profession in the late '90's up until his death a few months ago.

For years Dr. Louis Curtis Ager was a general practitioner in the Bay Ridge section His office was at Seventieth Street and Third Avenue. A few years ago he moved down town. Dr. Ager was the first physician in this section to sell his horse and carriage and buy an automobile for general use in visiting his patients.

In the late '90's Dr. Charles W. Stickle opened an office at Fifty-Second Street and Thirteenth Avenue. He was a graduate of New York University, class of 1893. After engaging in medical practice several years he took up special work and removed down town.

For a few years Dr. Thorne, living on the Shore Road did a little practice. He was a retired U. S. Army Surgeon.

In the lower Bensonhurst section Dr. Fleet Speer was the head of a private sanitarium for several years. He was a tireless worker and his practice extended all other Brooklyn.

In the late '90's, Dr. Robert Franklin Ives, a graduate of the College of Physicians and Surgeons in the year 1895, opened an office at Eighty-Fifth Street and Twenty-Second Avenue where he resided up to very recently when he removed to the Flatbush section of the city.

The last physician and the last to pass away was our good friend and secretary, Dr. Frank Elbert Applegate Stoney.

Dr. Stoney was born May 1, 1874, and died May 13, 1917. His birthplace was in Matawan, N. J. He was the son of the late James B. and Zephena Carhart Stoney. He was educated at Maryland University and received his medical degree from the Long Island Medical College, class of 1897. He served two years interneship in the New York Polyclinic Hospital. Soon after locating in the Bay Ridge section he became interested in the Bay Ridge Hospital movement. When the dispensary at Sixtieth Street and Second Avenue opened he was appointed visiting physician. Through his work in the dispensary and his influence with the Department of Health the Tuberculosis Branch was established in Bay Ridge Section. He was later made Chief of this branch. His special work was along the line of tuberculosis. On this subject he lectured before lay audiences and several papers were written by him on the subject one of which he lately read before this Society. Dr. Stoney was a thorough musician and after his profession music was his main life work. Church music appealed to him especially. As we knew him he was a great big, good natured, lovable character. Among his clientele were many of the finest and most cultured people in this vicinity. He was most beloved by all who knew him and we all feel his loss keenly. At the time of his death he was the Secretary of this Society and we all know how this Society has prospered during his secretaryship The cause of his death was cardio-vascular disease.

In all seventy-five physicians located in southern Brooklyn during the latter part of the nineteenth century, twenty-one have removed, twenty have died and thirty-four are still alive and in practice.

In thinking over the lives of physicians there is probably nothing more to add except that the words of the poet may apply in the instance of most of those lives which we have had the privilege to consider: "To work on, to serve on, to love on, unnoticed and unafraid, is perhaps the finest heroism the earth can show."

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* President's address read before The Medical Society of Bay Ridge. June 5th, 1917.

FRONTAL SINUSITIS WITH INTRA-CRANIAL COMPLICATIONS.

Case Report.

Charles L. Stone, M. D.

Brooklyn-New York.

HISTORY—Patient, female; age 32 years; admitted to the M. E. Hospital on morning of September 5, 1917.

For about ten days previous to admission had been treated by Dr. H. K. Bell for acute frontal sinusitis following ordinary head cold. Principal symptoms during this period consisted of mild prostration, slightly elevated temperature, nasal discharge, frontal headache and tenderness. On September 3rd, there was considerable increase in the intensity of the headache. On the morning of the fourth the patient appeared dull and apathetic, answering questions with hesitation and confusion. Later in the day this condition cleared and the patient appeared better until night, when without warning she had a severe general convulsion followed by a short period of unconsciousness. On admission to the hospital, one hour later, she could be aroused and answered questions intelligently but with hesitation. There was no complaint of headache. Temperature and pulse were but slightly elevated. On examination certain objective signs of frontal sinus empyaema were noted, namely—oedema of left upper eye lid, swelling and of left middle turbinate with pus in region of naso-frontal duct and tenderness on pressure over the floor of the sinus. Because of these signs and the evident meningeal irritation, a radical frontal sinus operation (Kilian's) was decided upon and done at once. At this operation, the sinus was found filled with creamy pus which later produced a pure growth of Staphlococcus Aureus. The ethmoid cells were nectotic and were removed to the anterior wall of the sphenoid. Ample drainage was obtained by means of rubber tube and gauze wick through the nose. Nothing further was attempted. For exactly twenty-four hours the post-operative course was uneventful and the limitation of the drainage to the sinus seemed fully justified. The patient slept a great deal but aroused easily and was mentally clear. Lumbar puncture produced a clear fluid under slight increase of pressure. Examination of this showed presence of copper reducing element, cell count nine, and no increase of globulin. Blood examination gave a leucocytosis of 24,000, with 90 per cent polyneuclear cells. On the morning of the sixth while the house surgeon was taking the blood pressure, the patient had her second convulsion. This was general (epileptiform), lasted fully two minutes, and was followed by at least thirty minutes of complete unconsciousness. During this period, the pupils were dilated and fixed. Spinal fluid was again obtained and found normal. The eye grounds were normal with the exception of "slight venous distention." Meanwhile there was a rapid and complete abeyance of all meningeal symptoms except for slight clouding of the sensorium as evidenced by the patient's deliberation in answering questions. The condition was otherwise encouraging and it seemed that we were dealing with the so-called, Meningisme, a toxic meningeal irritation which would presently clear up. On the morning of the eighth, however, a deepening of the apathy and the recurrence of two severe convulsions within a space of nine hours, decided us upon intra-cranial exploration. This was done in the afternoon. Exposure of the frontal region was obtained by extending the Kilian incision across the bridge of the nose into the opposite eye-brow, which was not shaved. By this means, the whole forehead integument was reflected. The upper part of the inner wall of the frontal sinus was then removed, exposing the dura. This was found to be dull grey and sloughy looking and did not pulsate. On further exposure below and to the outside, considerable exudate was encountered. This did not look like ordinary pus, but had the appearance of softened brain tissue. Under this area of exudate, which extended below and externally beyond the limits of the simus, the dura was thinned and in spots absent and apparently matted to the other menbranes and adherent to the brain. Thus we had what might be called a dural abscess with an area of superficial encephalitis due to adhesive inflammation. This is the first step in a pathological condition, first described by MacEwen, in which the further process consists in a breaking down of the adhesive barriers and an extension and diffusion of the infective material throughout the sub-arachnoid space—in short the production of diffuse meningitis. After evacuating the exuduate by gently lifting the brain away from the skull, a wick of folded rubber tissue was inserted and carried out through a point in the skin incision opposite the inner canthus. The remainder of the incision was then closed.

A culture taken from the dural exudate gave a pure growth of staphlosoccus aureus. The patient's condition following this second operation was briefly as follows: For twelve hours the respirations were slow, varying from 8 to 18 per minute and at times irregular. Pulse and temperature were slightly elevated. Early in the morning of the tenth and again on the eleventh there was a slight muscular twitching of the face and arms, lasting only a moment or two and accompanied by no impairment of consciousness. From this time since there has been an interrupted improvement. When last seen about October sixth the patient had completely regained her normal health and the operative scare was barely visible.

The pathology of this case is interesting. The channels of infection were undoubtedly the lymphatics connecting the frontal sinus mucosa with the dura. This was appearent from the intact inner table and the presence of an ulcerating process involving at once the membranes and the surface of the brain. In the more common mode of extension—seen so frequently with chronic mastoid infection—there is usually a caries of the bone with a dura, thickened and covered with pus and granulations. In these cases the dura is only superficially involved and acts as a proctectant to the deeper structures—so much so in fact, that latency is common even for long periods. The early onset of epileptiform convulsions inthis case, i. e.—before we could demonstrate the usually accepted signs of increasing cerebral pressure or of spreading meningitis—is more or less characteristic of this sort of lesion when located in the frontal region. At least several similar cases have been reported in the past. Just how the pathology may explain this symptom is not clear. That convulsive seizures are not due to sudden transitory increase in cerebral pressure, as has been claimed by Kosher as a result of his investigations of so called idiopathic epilepsy, is apparently disproven in this case by the fact of normal eye grounds (absence of papilodema) and the low arterial pressure—105 mm. systolic—immediately before the onset of the second convulsion. It is possible that these seizures as well as the clouding of the sensorium may be due to cerebral toxaemia and acidosis. With this possibility in view, it would always seem advisable to add to our usual routine tests of the spinal fluid, the tests, as originally proposed by Kopetsky, for the determination of the presence of the products of lecitin decomposition—i. e. cholin and lactic and the fatty acids.

MINUTES OF THE FIFTY-NINTH REGULAR MEETING OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND HELD AT THE HOTEL NASSAU, LONG BEACH, L. I., SATURDAY, OCTOBER 20, 1917.

James Cole Hancock, M. D.

THE fifty-ninth regular meeting of the Associated Physicians of Long Island was held at the Hotel Nassau, Long Beach, L. I., Saturday, October 20, 1917, and was called to order by the President, Doctor J. Carl Schmuck, of Lawrence, at three-thirty p.m. Forty guests and members attended, and, although many meetings have shown a larger attendance, few have proven more satisfactory and enjoyable to those who did attend. The weather always seems to be made to order when we go to Long Beach for the October meeting and too much cannot be said in appreciation of the very courteous welcome always extended to us by the management of the Hotel Nassau, everything possible being done to make us comfortable among which the excellent dinner, invariably provided, is by no means the least to be mentioned.

As the minutes of the June meeting had been published in the Long Island Medical Journal the reading was omitted, by general consent.

The membership committee presented the following name:

Isham G. Harris, M.D., Brooklyn State Hospital, Clarkson Avenue, Brooklyn. New York University 1890. Proposed by James Cole Hancock. Doctor Harris was elected by unanimous consent.

Doctor Henri M. Auger of Jamaica and Doctor George A. Osstrander of Brooklyn were recommended to the Society, by the Board of Directors, for Emeritus Membership. These recommendations were favorably acted upon by the Society and these two gentlemen became the first Emeritus Members elected by the Society.

Doctor Edwin S. Moore proposed, and the motion, being seconded, was carried, that, The dues of all members of the Associated Physicians of Long Island, who are in active military service, be remitted.

(Note: Members who are in active military service will please communicate the fact to the Treasurer, Doctor Edwin S. Moore, Bay Shore, L. I., as he has no other way of knowing and so carrying out the intent of this resolution.)

The President called for a general, informal, discussion concerning the plan and scope of the annual meeting to be held in Brooklyn in January, stating that it was intended to hold this meeting at the Long Island College Hospital. The object of this discussion was to bring out all ideas tending to make this meeting the more interesting and valuable to the greatest number possible, and to arrange the hours for clinics, appers, etc., in a way best suited to the convenience of all, but more especially, to the convenience of the members resident at the eastern portion of the Island. A very important point, also, was discussed at length, and that was the necessity for providing sufficient time, at this meeting, for proper attention to the business concerns of the Society. These business details should be brought to the attention of as many of the members as is possible for their discussion is a vital necessity to the welfare of the Society, and this is especially so concerning the details in connection with the running of the Long Island Medical Journal. Another point, enthusiastically discussed, was: That no matter what the nature of the meeting, we should certainly have a dinner in the evening, as has been the custqm for so many years. All who spoke upon this matter favored the dinner.

The President appointed the following members to serve on the nominating and auditing committees, both to report at the annual meeting.

Nominating Committee: Doctor William H. Ross (Brentwood) chairman, Doctor Henry M. Mills, Doctor H. Beeckman Delatour.

Auditing Committee: Doctor O. Paul Humpstone, Chairman; Doctor Burdge P. MacLean, Doctor Purdy H. Sturges.

At the close of the executive session Doctor Clarence Reginald Hyde, of Brooklyn, chairman of the scientific committee, took the chair and introduced Doctor Carl H. Laws of Brooklyn, Professor of Pediatrics at the Long Island College Hospital, who read a paper entitled "Fat Indigestion of Infancy." This was a very interesting and instructive paper and closely held the attention of those present. It was discussed by Doctor Walter D. Ludlum, Doctor James W. Winfield and Doctor Timothy F. McCarthy and the discussion was closed by the author.

As Doctor Glentworth R. Butler of Brooklyn was unable to be present his paper was read by title. The title was, "A Short Talk on the Cardio-Vascular and Tuberculosis Unit of the Army."

Doctor Harris A. Houghton of Bayside gave an interesting talk, illustrated with a chart, concerning a case of Pancreatic Diabetes. He also presented an interesting chart-table setting for a simple method for determining the nutritive values of various articles of food.

Doctor Henry P. De Forest told the Society of some interesting expereiences concerning Camouflage.

Dinner was served at six.

James Cole Hancock,
Secretary.

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

NOVEMBER, 1917

STATED MEETING, OCTOBER 16, 1917.

The President, Dr. Albert M. Judd, in the chair. There were about 600 present. The meeting was called to order at 8:40 p.m.

It was moved, seconded and carried that the executive session be dispensed with for the evening.

The program for the evening was as follows:

Scientific Program.

Medical Needs and Conditions of the National Army.

Addresses delivered by

Major Franklin H. Martin,
Member of Advisory Commission, Council of National Defense; General Secretary, American College of Surgeons; Secretary-General, Clinical Congress of Surgeons of North America.

Major Henry D. Jump,
Member of Committee on State Activities and Examinations of the Medical Section of the Council of Defense; President, Philadelphia County Medical Society.

Robert L. Dickinson, M.D.,
Member of General Medical Board, Council of National Defense.

(Moving pictures of war scenes were shown in the course of the evening.)

Meeting adjourned at 11 p.m.

C. E. Scofield,
Secretary.

EDITORIAL

DO IT NOW.

NOT so long ago an estimable citizen, ten minutes behind his usual breakfast hour, hurried for an elevated train. It was in that section of the city where a warning bell gives notice of the approaching train and the bell was ringing. Forgetful of his full stomach and mindful only of that peculiarly American motto "do it now," the citizen hurriedly elevated his recent breakfast up two flights of stairs only to collapse at the top. He not only missed his train, but created a considerable excitement among such of his neighbors as happened to be on hand, distressed his family, was absent several days from the office and incidentally suffered a moderate acute dilatation of the heart.

If there is one American characteristic that impresses itself upon the visiting foreigner more than all else, it is the tremendous haste at which we live. We bolt our meals, we hustle through the streets, we imperil our own lives and every one elses with speeding automobiles, we crowd through our work, we hurry through our pleasures, we hurry through our sleep, for what? For a series of desirable acquisitions ranging from the quick death of an acute dilatation of the heart to the more prolonged anguish of arteriosclerosis. With all this haste and confusion the worth-while accomplishments of the average citizen are nil.

One is reminded of a young Italian lawyer who came to this country penniless, but full of ambition. His stock in trade when he married was a blessing from his father and a newly-acquired bootblack stand. He shortly added a fruit stand, and began to read law. In his own words: "I sit between the bootblack stand and the fruit-stand, I black boots, I sell fruit, I read law all night. I get office up ten flights of stairs, I run up stairs, I run down stairs, I buy real estate with one hand, I sell it with the other. I been a very busy man, doctor, I got eight children." Yes, and he died of a degenerated heart at thirty-five and left seventy thousand dollars which was rapidly squandered by his family, and his children got little or no benefit from their parentage. The insistent clamor of American business methods, the hustle, strain, success and the ultimate failure are all epitomized in this true anecdote. One realizes with no little bitterness the impotency of crying out against this habit of haste which has been a potent factor in destroying the American home, propagating American extravagance, spoiling American children and leaving the country today in a state where haste is imperative to save us from ultimate annihilation. "Do it now." Yes, but do it with deliberation and reasonableness and with full appreciation of the fact that friction without lubrication is no more destructive than high speed living and thinking without deliberation.

H. G. W.

THE PROBLEM OF THE CIVIL HOSPITAL.

AMONG the problems that are rendered more acute by the accentuated cost of living, possibly none appeals to a large proportion of the medical fraternity so acutely as does the hospital problem. Within a few weeks notice has been served by more than one of the semi-private institutions of substantial increases in all their charges. It is within very recent memory when a dollar a day was considered a generous charge for a ward bed and there was some murmuring because most hospitals have endowed beds and this seven dollar rate was thought to be unfair, in as much as the cost of care in the wards was largely carried by endowments. The time is now only a little way off when the present ten-dollar rate will be raised, as have all the rates for semiprivate and private patients. The charge for radiographic work has increased so that while five years ago most hospitals made only a nominal charge to private patients, and none to ward patients, the fees now charged approximate, and in some instances exceed, those of well equipped private laboratories. The cost of nursing has increased one-half and the hospitals are charging generously for the board of private nurses. If one takes a specific instance such as an ordinary major operation, and the patient elects a private room, by the time the operating room fees, hospital fees, radiograph charge, nursing expenses and room rent are considered, the total may be conservatively placed at $100 for the first week and $60 for each succeeding week; let us say $250 hospital charges for a three weeks' residence. At private ward rates, provided a special nurse were required, this figure would still approximate $175, or $100 if ordinary nursing were utilized. This takes no account of the surgeon's fee. As it is the tendency of the private hospitals at present to limit their charity patients to exceptional cases on the ground that their expenses are constantly mounting, it becomes evident at once that hospital treatment for private patients is no longer an economy.

Another angle of this problem is the serious difficulty experienced in providing adequate interne service, a difficulty that is felt by all hospitals, even those whose reputation in ordinary times attracts an excess of applicants. There are many reasons why this dearth has occurred. Hospitals have greatly increased in number and many of them are offering salaries to internes, a feature that has increased materially with the growth of hospitals in small centers. Many of these institutions are most modern in their equipment and offer unusual opportunities for independent work on the part of the resident. As most recent graduates in medicine are obsessed with the idea that it is to their advantage to operate on their own account as often as possible, this feature of hospitals removed from the main center of the population is a very attractive one. It is wellnigh impossible to persuade a medical student that he gains more by acting as assistant to an operator of experience, and still more if he has the opportunity to serve under two qualified surgeons whose methods he may compare. Independent operating is excellent after one has gained a sufficiently broad experience as an apprentice, but it is absolutely unfair to the patient who is submitted to the unguided enthusiasm of a green interne; nevertheless this is a large factor in the interne problem. One hesitates to add that the promptings of commercialized medicine have also a part in lowering the ideals which every conscientious student should place before himself. More recently the requirements of the draft have still further reduced the available supply of internes by diverting them to the Federal Service, a step that cannot but prove harmful in the near future. Most of the states have recognized the necessity for a hospital training before conferring a license to practice and many have provided definite regulations to that end. If prospective medical students are to be taken into military service, where is the supply of civilian doctors to be recruited from after the war? Unless some immediate steps are taken to conserve this supply, a generation of poorly equipped practitioners will appear within the next six years and the progress of scientific medicine will receive a serious setback. Steps should at once be formulated to prevent this grave danger to the public health.

The nursing problem, while it presents some difficulties, is not quite so serious a one inasmuch as the available supply of women applicants has not been materially diminished. On the other hand, endeavors to unionize the trained nurses have raised the requirement for admission to training schools, while the nurses themselves have raised their prices and shortened their hours, so that the large bulk of the population cannot afford trained nurses. In this State at least repeated efforts have been made to limit the right to nurse to graduates of accredited training schools thereby increasing the burden on the public purse. If one adds to these factors the enormous increase in the cost of coal, milk and food stuffs generally, the problem which is presented to the average hospital is a serious one. It must choose between raising its rates and thereby becoming less a hospital and more a sanitarium, or keeping down its rates and trusting to private charity to make up the deficit. Granted that from the financial standpoint the hospital can meet its necessary demands, what is it to do from the professional side?

Of the one hundred forty odd thousand doctors in this country over twenty thousand are already in the Federal Service. Twenty thousand more are urgently needed, and if the National Army is further increased, as report has it that it may be, to five millions, then another forty thousand doctors will be needed for military service. Of the remaining one hundred thousand, many are in country districts, from which, under no circumstances, must they be taken, many are beyond the age of efficient service and many are utterly unfitted by lack of training for hospital work. If the hospitals are to continue even with impaired efficiency, it seems likely that the routine work of caring for patients in wards will fall upon those older men who are unfit for military service, aided by a comparatively small number of women physicians and nurses trained to history taking and routine ward dressings. This means an added burden on the already limited time of the physicians without increased income unless the hospitals can be awakened to raise money for part time salaries for their visiting staff. It is conceivable that the practitioner might so arrange his time as to conduct his office consultation work at the hospital and possibly arrange to spend two or more nights a week at the hospital to meet emergencies. This is offered as a suggestion that is worthy of discussion. These premises are offered on which the syllogism is to be constructed: First: The civil hospitals must be preserved with the least impairment to their efficiency. Second: The energies of the medical profession must be conserved with the least wear and tear. Third: The care of the public health must be continuous and efficient with the minimum of added expense.

The Journal will welcome any suggestions bearing on this immense problem and be glad to afford opportunity for their fullest discussion.

H. G. W.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular meeting of the Brooklyn Surgical Society, held at the Building of the Medical Society of the County of Kings, 1313 Bedford Avenue, Thursday, October 4th, 1917, at 8:30 p.m. The President, Raymond P. Sullivan, M.D., in the Chair.

Program.

Report of Cases:
A. 1. Tuberculoma of the Buttock.
2. Sarcoma of the Superior Maxilla.
Lewis W. Pearson, M.D.
B. 1. Ulcer of the Pylorus. X-ray Photographs.
2. Littre's Hernia. Specimen.
J. Sherman Wight, M.D.
(Reported by S. W. Green, M.D., Interne Long Island College Hospital).
Case 1 discussed by Drs. A. H. Bogart, J. P. Warbasse and J. E. Jennings.
1. The Closure of Wounds after Amputation of the Breast. Lantern Slide Demonstration. *James P. Warbasse, M.D.*
Discussed by Drs. J. E. Jennings and J. P. Warbasse.
2. Remarks upon Surgical Aspects of some Lesions of Bone. Lantern Slide Demonstration. Patient.
Henry F. Graham, M.D.
Discussed by Drs. F. E. Brown, J. P. Warbasse and C. H. Goodrich.

Tuberculoma of the Buttock.

Lewis W. Pearson, M. D.

The title given to this case on the program of tuberculoma of the buttock is a mistake. It was not of the buttock. The lipoma was on the side. That is of no special importance, however.

The report of the case is as follows:

Mr. H. B., 58 years.

Family History—Negative.

Personal History—Negative. Beyond being nervous, there is nothing to report.

History of Present Trouble—Seven years ago a growth, apparently a lipoma, appeared on the left side of the body, over the eighth and ninth ribs. It gave no trouble and no thought was taken of it. In the spring he sustained a fall, injuring the right thigh, but the side was not hurt. Of late the tumor has been a little tender on pressure. I saw the patient in July. A tumor presented as above indicated and was about six inches by three inches in its diameters. It was slightly tender on pressure and was traversed by bluish lines. With the assistance of Dr. Sheehy it was removed on July 27th. Deep down, near the ribs, an induration, about the size of a pigeon's egg, appeared. It was diffused into the adjacent tissues as an infiltration. It was very hard and one section was grayish, resembling malignant tissue. The specimen was sent to Dr. Archibald Murray, who reported it tubercular. Looking through many surgical works, I was unable to find any case of tubercular changes in lipomata. They calcify, necrose, ulcerate, etc., but this change appeared to me to be unique, which is the reason of this report.

Sarcoma of the Superior Maxilla.

Lewis W. Pearson, M.D.

The other case which I have to report is, a sarcoma of the superior maxilla.

Mrs. T. M., age 48 years, Italian.

Family History—Negative. There is no cancer in any of the relatives.

Personal History—Negative.

History of Present Trouble—In May, 1916, a swelling apppeared on the upper right maxilla, within the mouth. A physician was consulted, who diagnosed it as an abscess, and at different times incised it, altogether several times. The patient went to the Post-Graduate Hospital in October, 1916. A specimen was excised for examination and the patient was referred to the Memorial Hospital for treatment. There she received six radium treatments, three within the mouth and three outside the mouth, within three months. The patient insisted that each treatment was followed by an exacerbation of the symptoms. I saw her in July in consultation with Dr. J. Wachsman. The right upper maxilla was swollen and an ulceration presented under the inner angle of the eye. The ulceration within the mouth involving the maxilla was marked. The entire right face was swollen and the pain in the head constant and severe. Any curative measure was out of the question. As a palliative measure, ligation of one or both external carotids was considered. All that could be hoped for was explained to the family, and the members of it elected to have the operation for palliative purposes.

Operation—Assisted by Dr. J. Wachsman and Dr. Fritz, we proceeded to ligate the right external carotid, on the 29th of July. An incision was made along the anterior border of the sterno-mastoid, extending from midway between the angle of the jaw and the lobe of the ear above to a point opposite the middle of the thyroid body below. Passing through the platysma and deep cervical fascia, the posterior belly of the digastric came into view. Below it curved the hypoglossal nerve. The great cornu of the hyoid bone was now palpated and we felt we must be about the point of bifurcation of the common carotid. A large artery was palpated, but no bifurcation presented. We followed this up to the angle of the jaw, and there a division took place. A branch passed off into the tissues about the submaxillary gland. It was smaller than I expected and I was puzzled to know if this was the external carotid. The other and longer branch continued upwards and deeper and gave off no branches. We then proceeded to ligate the external carotid in this anomalous position and in doing so wounded the superior thyroid, which passed inwards at this point. The operation was completed and the face appeared blanched. The following day the color was restored. For some days the pain in the head and face was much better. By September it was again getting severe, and on September 13th, at the insistence of the patient, we ligated the left external carotid, which was normal in position. Again the pain was relieved, but it is gradually becoming severe again and the ulceration is enlarging.

I was disappointed in the brief delay in the progress of the growth and the short respite from suffering, or rather, amelioration of pain, for it never ceased entirely.

This report is made to chronicle the anomaly of the external carotid, as well as to express my disappointment at the brief delay of pain from ligation of both arteries.

Perforating Pyloric Ulcer.

J. Sherman Wight, M.D.

30 Schermerhorn St., Brooklyn, N. Y.

D. M., fireman, age 32, Spaniard, came to the Long Island College Hospital complaining of pain in the epigastrium especially after eating, vomiting. His family history was negative.

He was operated for this same condition about five years ago while in Spain. He was relieved for a short time when the pain came back. He has been getting worse during the past month.

Examination showed a fairly well nourished man. Tongue coated; teeth in good condition; tonsils free from infection. The lungs were negative; the heart was negative. His systolic pressure was 132. Diastolic pressure 90.

R. B. C. 4,500,000. W. B. C. 8,720. Poly. 71%. Hgb. 95%. His Wassermann was negative.

There was a scar of an old operation in the epigastrium Gastric examination showed hyperchlor. There were no masses in the abdomen; there was tenderness just above the umbilicus.

The X-ray picture of the stomach, showed a perforating gastric ulcer. Urine analysis was negative.

An incision was made through the old scar. Adhesions were separated and there was no evidence of any prior precedure but an exploration. A large perforating ulcer was found on the anterior surface of the pyloric antrum near the lesser curvature. A posterior gastroenterostomy was done first and then the pyloric end of the stomach containing the ulcer was excised and the duodenal stump was anchored in the pancreas.

The ulcer was too extensive to permit of any plastic operation short of a closure of this end of the stomach.

Eight X-ray plates.

Littre's Hernia.

J. Sherman Wight, M.D.

30 Schermerhorn St., Brooklyn, N. Y.

A. W., civil engineer, age 33. Was referred to me complaining of pain in the left inguinal region and vomiting. His family history was negative. He had typhoid at twelve years of age. He suffered for the past two years from pain radiating from his left groin to his testicle, and he has had some swelling of his left groin. He was taken with general pain in the abdomen which finally localized in the left inguinal region. He took castor oil and vomited.

Examination showed him fairly well nourished. Heart, lungs and urine negative. He presented a strangulated hernia in the left groin.

Incision was carried down over the tumor into the scrotum. When the hernia sac was opened, a large Meckle's Diverticulum which was gangerenous, presented. This was as large as the ileum and it came off about 16" from the caecum. The gangrene extended into the ileum on either side. Three and one-half inches of the ileum were removed on each side of the Diverticulum and the guts united with fine chromic sutures. He made an uninterrupted recovery.

Specimen and X-ray.

The Operative Treatment of Chronic Osteomyelitis.

Lantern Slide Demonstration.

Henry F. Graham, M. D.

Operations upon bone always have a fascination all their own because they are mechanically exact and allow of individual ingenuity.

I think, however, that we are apt to forget that bone is living tissue with blood supply and nerves in which vital processes are constantly taking place. We are too prone to treat it as we would a block of wood or stone and then wonder why we get such poor results from such splendid operations that we were sure had been technically perfect.

There are really only two basic principles to be observed.

1st. Remove all dead bone and granulation tissue.

2nd. Provide nourishment for the bone that is left.

In the long bones such as the tibia and femur which are so frequently affected this means an extensive incision and free use of the chisel, gouge, rongeur and curet until the involved area, which is frequently the entire shaft, has been converted into a shallow trough.

Then living tissue must be brought into contact with the remaining bone (marsupialization as it is called) and held there.

This can usually be accomplished by loosely suturing the overlying tissues and forcing them against the bone by a pressure pad and a snug bandage.

Even where it is impossible to entirely cover the bone the use of gauze packing directly against the bone should be avoided and any remaining spaces allowed to fill with blood clot.

Difficult regions to cure are the condyles of the femur, and the tuberosities and lower end of the tibia. It is sometimes possible to obliterate such cavities by pedicled flaps of tissue held in place by packing outside the tissue but not against the bone.

On the shaft a similar hinged strip of tissue from one or both sides often is valuable.

On the outer side of the femur it may be necessary to incise the fascia lata transversely to allow the soft parts to drop into the cavity. My most successful case thus handled I reported to this society some years ago. This patient was entirely healed and free from dressings three weeks after an extensive operation on the femur. He has stayed well ever since.

Most cases of chronic osteomyelitis of the tibia can be cured by one operation. The time required, of course, varies with the case from a few weeks to months. Occasionally a small spicule of bone will flake off and work itself out and then the wound immediately heal.

The type of infection is an important factor in the time.

Sunlight and electric light directly on the wound hasten recovery.

My experience with bone-wax has not been sufficient to warrant a discussion of its use.

Chardavoyne. May 23, 1916, injury. January 4, 1917, op., left hospital January 30, 1917.

Sjin Sein—June 4, 1916, to August 22, 1916.

Gaine—Op. January 29, nine months after injury. Two months later nearly healed. No dead bone.

Dr. Frank E. Brown, in opening the discussion, said:

"Dr. Graham discussed a number of bone lesions, but I desire to merely touch upon the subject of osteomyelitis.

"I can heartily commend all he has said about the necessity of thoroughly exposing the diseased area, cleaning and bringing down all that skin flap of living tissue, approximating it to the area and avoiding, if possible, the presence of gauze against the bare bone. Since doing away with gauze against the bone I have had far better results. That is well enough in the chronic forms of osteomyelitis, but we sometimes have to deal with acute osteomyelitis in a long bone. I had a series of unfortunate results while doing the ordinary method—full exposure and cleansing of the cavity. Many cases died shortly after operation. Some time ago I modified that procedure by opening over the area that seemed to be involved, simply trephining the bone into the area in the bone, about an inch, and having a width of the medullary canal, then with a long probe passing downward to the epiphyseal line and cleaning out the medullary cavity with a curette if there were any pus, and then working backward and making an opening above the bone the same size as the first one, and with this long probe passed through one opening into the other, attaching a suture to the probe and drawing through the medullary canal a large pledget of gauze and using it as a sort of ring to clean out the cavity. I was able to save considerable time by doing this and in the acute septic cases it seemed to be of decided importance. The wound was simply closed with a rubber tube leading down to the medullary cavity in the upper and lower wounds. I have had a great deal better results. I have not lost a case as yet, unless it was moribund at the time of operation, and it has been rather surprising to me to see the course that some of these cases have followed. All of them have been in children and all except two or three of them have cleared up without any subsequent operation. The tube was removed on the fifth to the tenth day, depending upon the amount of discharge, and the wound allowed to granulate. Some have required subsequent operation for areas that were not reached at the time of the first operation, but the great majority closed without further procedure."

Dr. James P. Warbasse, in discussion, said:

"I do not know of any disease in surgery in which the surgeon may be so culpable because of delay and the consequences thereof so serious as acute osteomyelitis. As yet few surgeons are seeing these cases sufficiently early. How rarely a surgeon sees an acute case of osteomyelitis in the absolutely initial stage when a simple trephining of the bone is all that is required to save the patient the horrible results which we commonly see. A matter of twenty-four hours in an acute case of osteomyelitis will make the difference between a simple and a serious operation. A simple incision with trephining and a little gauze drain cures the first; the second may mean an incision involving the whole length of the tibia, removal of the complete shaft, and the subsequent care of a patient with damaged heart valves and metastases to other parts of the body."

DR. JAMES P. WARBASSE, in discussion, said:

"I would like to emphasize one point, if I may be permitted to do so. Dr. Goodrich suggested that we must keep at our internes, to hammer away at them so that they may recognize these cases. I would say that it is not the interne nor the surgeon who is at fault. If there is any class of disease which the surgeon knows about it is this class. The general practitioner is the one who is guilty in osteomyelitis. The pathetic thing is that we so frequently see these cases coming with metastases and damaged hearts treated by poultices, serums, etc., temporized with by the general practitioner, who fails to recognize the importance of getting the cases to the surgeon promptly. No longer does he err in appendicitis, but he still fails on osteomyelitis."

DR. CHARLES H. GOODRICH, in discussion, said:

"The point which Dr. Warbasse raised about the importance of early diagnosis was very well illustrated in two cases which came into my service at the Methodist-Episcopal Hospital at the same time or about the same time. One child had an infection of the lower end of the humerus. I was able to operate in that case during the third twenty-four hours of the infection. The lower end of the humerus was trephined and pus evacuated. The trephine opening was all that was made. A gauze drain was put in and the wound was entirely closed on the fifteenth day and there was no further trouble. The other case, osteomyelitis of the tibia, came to us on the eighth day of the disease. The boy was in the hospital for eleven months. At the time of his admission, when he was seriously ill, an emergency operation of drainage of the bone was done. After three or four months we were obliged to remove a sequestrum representing the entire shaft of the tibia. He now has a perfect result (I have seen him within a week), although his disability lasted an unreasonable length of time because of delayed diagnosis outside of hospital.

"It seems to me also that we should ourselves emphasize the importance of watching for metastases and pound away at this point with our internes because it is one which is occasionally overlooked in the routine administration of our duties.

"I happened to see a case in a distant town in consultation some years ago, where an operation had been done for osteomyelitis of the tibia—a very excellent procedure, and the tibia seemed to be doing fairly well, although still discharging a thin purulent material. The question was, Why was the boy running a high temperature? On going over the chart I noticed he had the septic fluctuations that one would expect to find with a continuing disease in the bone. Upon examination I found the entire shaft of one ulna was involved. Unfortunately, in that case, the condition had been diagnosed as a rheumatic disturbance of elbow.

"Our routine is to examine the ends of the diaphyses of all the long bones day after day in making rounds because of the possibility of metastasis. We had a case at the Methodist-Episcopal Hospital before I went away on vacation in which there was a metastasis in upper humerus three days after operation on the tibia."

Medical Book News

BOOK REVIEW SUPPLEMENT TO THE *LONG ISLAND MEDICAL JOURNAL*

Edited by JAMES M. WINFIELD, M.D.

All communications, books for review, etc., should be addressed to the Editor of this Department, 1313 Bedford Ave., Brooklyn, New York

1917, No. 1 NOVEMBER, 1917 10 PAGES

SKIN CANCER

SKIN CANCER. By Henry H. Hazen, A.B., M.D. C. V. Mosby, Publisher, St. Louis, 1917. Price, $4.00.

THIS work of Dr. Hazen is timely for cancer in all its relations is just now under rigid investigation, and it is quite possible that these new growths of the skin might not receive all the consideration that should be given to them, for, as Dr. Hazen points out, many of these life destroying neoplasms have their origin from some, apparently, insignificant cutaneous lesion or blemish.

This book also emphasizes the fact that at least 90 per cent of skin cancers can be cured if the diagnosis of beginning cancerous changes in the skin can be made in time.

The methods of treatment are carefully discussed, and the conclusions from the author's large experience will be of great aid to any one who is fortunate enough to have read the book.

The Reviewer wishes it were possible for every medical man to own a copy. J. M. W.

DISEASES OF THE SKIN

DISEASES OF THE SKIN. By Richard L. Sutton, M.D., Professor of Diseases of the Skin, University of Kansas School of Medicine. With eight hundred and thirty-three illustrations, and eight colored plates. Second edition, revised and enlarged. C. V. Mosby Company, St. Louis., Publisher, 1917. Price $6.50.

THE excellence of Dr. Sutton's text-book on Diseases of the Skin, is attested by the fact that the second edition was called for in less than a year after the first was issued. And if the author keeps adding new material and extensive revision of the subjects as in this one, it is a foregone conclusion that there will be many editions of this most modern work on dermatology.

The book is so written that any physician, be he a cutaneous specialist or general practitioner, will be able to find and understand how to handle these difficult diseases.

The American foot-note reference gives a complete index of all of the important American dematological literature for the past twenty years.

The subject of treatment is given full consideraion, all the therapeutic measures and methods that the author's large experience has found to be good has been given for the guidance of others. The important subject, cutaneous histopathology, is more emphasized in Sutton's book than in any other American treatise, which in the second edition has been in many instances revised up to date. This edition also contains several new topics, as for instance Gangrenous Balanitis, Atrophy of the Fatty Layer of the Skin, etc. Forty new illustrations have been added to a work already elaborately illustrated.

The new edition contains 987 pages, against 916 in the old, printed on heavy paper which makes the book rather bulky, a minor defect that undoubtedly will be remedied in subsequent editions.

The Reviewer unhesitatingly advises any one who wishes a modern, comprehensive, concise and very readable work on dermatology to buy Sutton's Diseases of the Skin.

J. M. W.

COLLECTED PAPERS OF THE MAYO CLINIC

COLLECTED PAPERS OF THE MAYO CLINIC. Rochester, Minnesota. Edited by Mrs. M. H. Mellish. Vol. VII. 1915. Illustrated. Phila. and Lond. W. B. Saunders Co., 1916. 983 pp., 8vo. Cloth, $6.00.

IN the realm of surgery the name of Mayo stands for all that is best. The latest volume of "Collected Papers" is full of splendid material. There are thirty-seven contributors, each a specialist in his line.

The contents are indexed under Alimentary Canal, Urogenital Organs, Ductless Glands, Head, Trunk and Extremities, Technic and General Papers.

Gastric ulcer, duodenal ulcer, and diseases of the bile passages are extensively covered. We regret that there are no articles on malignancy of the large bowel.

The Urogenital Section includes article on perinephritic abscesses, stone in the ureter, clinical reviews of 240 cases of non-surgical infection of the kidneys and ureters, procedures following nephrectomy, foreign bodies in the urinary bladder, vesico-vaginal fistula, etc.

The section of Ductless Glands covers the thyroid, goiter, studies in blood-pressure, adrenals and pancreas, pathology and diseases of the spleen, splenic anemia, splenectomy, etc.

McCarthy's papers on cancer are the most scholarly and best thought out series of articles on cancer that we have ever read. The fifty pages cover everything that is known about cancer to date.

The authors have used such rare judgment in selecting their subjects that the book is just as valuable to the internist as it is to the surgeon. ..HARRY R. TARBOX.

DIAGNOSTIC METHODS

DIAGNOSTIC METHODS. A Guide for History Taking, Making of Routine Physical Examinations and the Usual Laboratory Tests necessary for Students in Clinical Pathology, Hospital Internes, and Practicing Physicians. By Herbert Thomas Brooks. A.B., M.D. Third Edition. Revised and Rewritten. St. Louis. C. V. Mosby Co., 1916. 96 pp., 8vo. Cloth, $1.00.

THIS is a very compact little volume of ninety odd pages with a flexible linen binding which seems admirably adapted for its purpose of serving as a guide for medical students, internes and general practitioners who have a limited amount of time for laboratory work. The first two chapters are devoted to history taking and the physical examination of patients, and then come chapters on the laboratory tests of sputum, urine, gastric contents, blood, serous fluids and intestinal contents.

The various methods of tuberculin diagnosis are then taken up followed by a description of the preliminary preparation and tests for the Wassermann and the gonorrheal complement fixation reactions. The technique of staining and examining smears is briefly gone into and the final chapter gives a very handy and valuable list of the apparatus and reagents necessary for the equipment of a physician's laboratory.

The type is large and the paragraphing so well and clearly done that the text is easy to follow as the various tests are being done by the laboratory worker. W. H. DONNELLY.

SURGICAL AND GYNAECOLOGICAL NURSING

SURGICAL AND GYNAECOLOGICAL NURSING. By Edward Mason Parker, M.D., F.A.C.S., and Scott Dudley Breckinridge, M.D., F.A.C.S. Illustrated. Phila. and Lond.: J. B. Lippincott Co., 1916. 425 pp., 8vo. Cloth, $2.50.

THIS work is essentially a text-book for the nurse and covers in the most complete and comprehensive way the field of Surgical and Gynecological Nursing. The chapters on infection, accompanied as they are with excellent plates and microphotographs, are timely and most readable. A great deal of space is devoted to the description and uses of the instruments used in surgical and gynecological operations, and the very excellent illustrations produced are the last touch to a most excellent book. E. J. MCENTEE.

CANCER OF THE STOMACH

CANCER OF THE STOMACH. A Clinical Study of 921 Operatively and Pathologically Demonstrated Cases. By Frank Smithies, M.D., with a Chapter on the Surgical Treatment of Gastric Cancer. By Albert J. Ochsner, M.D., LL.D., F.R.C.S. Illustrated. Phila. and Lond.: W. B. Saunders Co., 1916. 522 pp., 8vo. Cloth $5.50.

A WORK focussing upon cancer of the stomach is timely. It is the most extensive presentation, dealing as it does with a single intensive corellated study of the largest number of patients suffering from the same disease, which we have seen published anywhere in any form. It is a collosal monograph of over 500 pages. Practically the entire work has been done by Dr. Frank Smithies. A chapter upon surgical treatment is contributed by Dr. Albert J. Ochsner.

In his volume are set forth the valuable facts obtained from 921 operatively and pathologically demonstrated cases of carcinoma ventriculi studied at the Mayo Clinic, the University Hospital (Ann Arbor) and at the Augustana Hospital, Chicago, over a period of ten years. Its value as a group study can not be overestimated.

There are twelve well organized chapters. I deals with the general distribution of cancer, II with morbid anatomy. The author makes the notable point that the early diagnosis of cancer of the stomach is a microscopic diagnosis, that is not to be made from the clinical study, the X-ray plate or chemists' analysis but from the histologic appearance of extirpated sections of the gastric well. The greatest number of operatively cured cases of cancer of the stomach is to be found in that group which appeared clinically and microscopically when exposed by the surgeon as chronic calloused gastric ulcer. Chapters III and IV deal with symptoms and physical abnormalities. Smithies has arbitrarily grouped his cases to show the various phases of the symptom-complex as follows: I Gastric cancer in individuals who were operated upon for benign gastric ulcer and in whom cancer was diagnosed microscopically, 72 cases—7.8%. II Gastric cancer developing clincally in patients with antecedent peptic ulcer history of years duration. 436 cases—47.3%. III Gastric cancer in persons, who prior to the onset of malignant disease had enjoyed perfect gastric health, 294 cases. 31.9%. IV. Gastric cancer in individuals in whom malignancy followed periods of gastric disturbance. of no clinical type. 84 cases. 9.12%. V. Cases of gastric cancer which presented few clinical evidences of a malignant process primary in the stomach wall. 19 cases, 2.1%. VI. Gastric cancer secondary to an extragastric malignant process. 16 Cases. 1.7%. Case reports are presented illustrating each of the several preceding groups.

In considering the physical examination of these patients the author gives us a personal and humorous touch, scoring those modest individuals who decry exposing the area of suspected disease to the examining physician but "who regularly display their anatomical perfections, wherever these may exist to the eyes of the multitude in order to partake of the psychic comfort supplied by the fox trot." Abdominal examinations are only too frequently neglected and we have all seen many such cases but the point that the writer wishes to make is that the majority of patients of the present generation are not loathe to expose any part the doctor may wish to see and feel when the matter is properly presented. Arraign the careless doctor, he should insist upon proper examination or refuse to treat the patient. The author suitably emphasizes seven signs of inoperability from the radical standpoint. An hitherto undescribed percussion sign is described. A dull note is commonly heard in dorsal percussion of Traube's space, which disappears at the end of deep inspiration or when the patient lies upon the right side. This sign has been observed in 18 out of 24 cases of carcinoma involving the superior portion of the stomach in which no epigastric tumor could be palpated.

Chapters dealing with the examination of gastro-intestinal function, the blood and Roentgen examination in gastric cancer are ably presented. Chapters on differential diagnosis and significance of gastric ulcer are valuable contributions.

We believe that this is one of the most valuable mongraphic studies which it has been our pleasure to review in this column. It is a model of its kind. It should receive hearty endorsement from the medical public.

ROYAL HAMILTON FOWLER.

THE ART OF ANESTHESIA

THE ART OF ANESTHESIA. By Paluel J. Flagg, M.D. Illustrated. Phila. and Lond., J. B. Lippincott Co., 1916. 341 pp., 8vo. Cloth, $3.50.

TWO good points about Dr. Flagg's book are that he has well confined himself to the art of anesthetizing, and has successfully shown a new scheme of the phases of the state of the patient being anesthetized. An improvement would be the inclusion of more detailed page references to those authors treating the more scientific aspect of the subject, for the benefit of those who desire fuller information on certain matters the knowledge of which he assumes.

Instead of the conventional three stages of Induction, Tolerance, and Anesthesia, the author uses the terms Induction, Maintenance, and Recovery. These three he further subdivides as follows: Induction, into excitement, rigidity, relaxation; Maintenance, into constant, variable; Recovery, into by crisis, by lysis. Reference to the author's various ideas is made easy by a well-wrought chart with many details of evidences, causes and control. There is a good working statement of the physiological factors which must be recognized, and a pertinent reference to the necessary part which the psyche of both the patient and the anesthetist plays in every anesthetization.

The illustrations are too large, and together with large type and heavy paper make the book appear of greater value and importance than is actually the case. However, the book is decidedly readable because written by a worker as well as a mere author. A. F. E.

HOMŒOPATHIC THERAPEUTICS IN OPHTHALMOLOGY

HOMŒPATHIC THERAPEUTICS IN OPHTHALMOLOGY. By John L. Moffat, B.S., M.D., O. et A. Chir. 166 pages, cloth, $1.25 net. Postpaid. Philadelphia: Boericke & Tafel. 1916.

THIS handbook, by the late Dr. John L. Moffat, will doubtless be acceptable to those who use homœopathic remedies in treating diseases of the eye.

It is noted in the Clinical Index, in the back part of the book, that belladonna is the chief remedy for glaucoma. However, under the heading of "Materia Medica," the author warns against the giving of "material doses," in the severe pains of glaucoma.

JAMES W. INGALLS.

LABORATORY METHODS WITH SPECIAL REFERENCE TO THE NEEDS OF THE GENERAL PRACTITIONER

LABORATORY METHODS WITH SPECIAL REFERENCE TO THE NEEDS OF THE GENERAL PRACTITIONER. By B. G. R. Williams, M.D., and E. G. C. Williams, with an introduction by Victor C. Vaughan, M.D., LL.D. Third Edition. Illustrated. 214 pp. 8vo. St. Louis, C. V. Mosby, 1915. $2.50.

THE third edition of this valuable book is particularly conspicuous for its clearness, preciseness and exactness. A very notable and commendable feature of this work is that all the chemicals, apparatus and utensils employed in a given test are detailed at the beginning of each test, so that preparation for a given procedure becomes very simple and may even be relegated to an assistant and at the same time one is assured that everything necessary for the complete examination will be prepared. WM. LINTZ.

CARE OF PATIENTS UNDERGOING GYNECOLOGIC AND ABDOMINAL PROCEDURES BEFORE, DURING, AND AFTER OPERATION

CARE OF PATIENTS UNDERGOING GYNECOLOGIC AND ABDOMINAL PROCEDURES BEFORE, DURING AND AFTER OPERATION. By E. E. Montgomery, A.M., M.D., LL.D., F.A.C.S. Illustrated. Philadelphia and London: W. B. Saunders Co., 1916. 149 pp. 12mo. $1.25.

IF the title of this little book of 149 pages of text and illustrations had read: "A Handbook of Gynecological and Abdominal Operations," the reviewer believes it would have given the reader a better intimation of its contents. It is a condensation of what some authors have endeavored to disclose and inculcate in a book of 500 pages, and comprises a conciseness and thoroughness of description and direction which gives to it logic and power. The comment on abdominal operations is lucid and authoritative. The illustrations in certain particulars fall below the average excellence of the book; the heavy drapery about the patient on the operating table fails to indicate with clearness and accuracy exactly what relation it bears to the topography of the abdomen *per se.* The directions for properly closing the abdominal wound contribute to the most favorable conditions for perfect union. The surgical technic of dressings and thorough support of the abdominal wall by adhesive plaster, closed in the median line by tape, leaves nothing to be desired, obviating the serious risk of nonunion where bandages are used for support, often inviting disaster.

It is refreshing to note that the author does not belong to a large class of gynecologists and surgeons who frequently use vegetable cathartics, notably cascara, in nearly all abdominal conditions, with influences not only injurious but often highly pernicious.

The completeness of illustrations, in minimized space, indicating the instruments needed for a given operation will aid the beginner and instruct the older operator. The conception of the author as to conditions and measures best adapted to the ends sought commends itself to the thoughtful, progressive operator, and will continue as a standard of authority until new experiences and larger unfolding of technical truth lift a new basis for procedure. WALTER B. CHASE.

CLINICAL AND LABORATORY TECHNIC

CLINICAL AND LABORATORY TECHNIC. By H. L. McNeil, A.B., M.D., Adjunct Professor of Medicine and Instructor in Physical Diagnosis, University of Texas Medical School, Galveston, Texas. Illustrated. St. Louis: C. V. Mosby, 1916. 88 pp., 12mo. $1.00.

THIS small volume contains in compact form and simple language, the technic of the routine clinical laboratory tests. The author has eliminated all theory and has succeeded admirably in preparing a working manual for the laboratory interne or the physician who does his own routine laboratory work. E. B. SMITH.

APPLIED IMMUNOLOGY

APPLIED IMMUNOLOGY. The Practical Application of Sera and Bacterins Prophylactically, Diagnostically and Therapeutically. With an Appendix on Serum Treatment of Hemorrhage, Organotherapy and Chemotherapy. By B. A. Thomas, A.M., M.D., and R. H. Ivy, M.D., D.D.S Illustrated. Second Edition Revised. Phila. and London, J. B. Lippincott Co., 1916. 364 pp., 8vo. Cloth, $4.00.

THIS volume is a storehouse of information for the physician who desires the facts of immunity in simple, understandable form. All reference to experimental research has been omitted. The chapters on anaphylaxis, auto-sera, bacterins, complement fixation tuberculin therapy, serum treatment of hemorrhage, organotherapy and chemotherapy present these subjects in as clear and readable form as we have yet encountered. The physician will find in this work not only a comprehensive and comprehensible resumé of immunity but a mass of practical details concerning the use of biological therapeutic agents covering indications, contra-indications, mode of administration, dosage and frequency.

PRACTICAL URANALYSES

PRACTICAL URANALYSES. By B. G. R. Williams, M.D., Director Wabash Valley Research Laboratory. Illustrated. St. Louis, C. V. Mosby, 1916. 142 pp., 12mo. $1.00.

THIS book is just as the author states "rather incomplete and of use to the student"; but for one who really wishes to study the urine in detail, there are many better books. P. M. S.

HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE

HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. By Henry S. Munro, M.D., Omaha, Nebraska. Fourth Edition, revised and enlarged. St. Louis, C. V. Mosby, 1917. 481 pp. 8vo. $5.00.

THE author evidently has the welfare of his patients at heart, and this in itself goes far towards effecting a cure.

"Suggestive Therapeutics," is a book that no one can read without deriving some good from it, and it should be read by the family physician especially. The writer is thoroughly imbued with his subject and his descriptions of his methods of becoming en rapport with his patients are easily grasped by the reader. The awakening interest in psychotheraphy which is manifesting itself at this time and the relation of psychotherapy to general practice are discussed in the first and second chapters and are easily understood. The point of educating the patient in its use and of removing from the subject all mystery is well taken, the hearty co-operation of the patient, the drugs used and the actions from these which are expected being described. The tendency today is toward the use of "drugless medicine" and the hold of this treatment upon its converts is due mainly to the neglect of the regular physician to employ suggestive therapeutics when he makes his call. Munro refers to Muensterberg, who says, in his "Psychotherapy," that the nearer the physician adheres to th estandpoint of psycho-physiology, the better he will succeed in practce Munro claims, and gives his reasons for his claim, that not alone functional but also organic diseases have been diagnosed and cured through suggestive therapeutics by reputable physicians.

In Chapter III, the author gives the scientific basis of psychotherapy. He quotes again from Muensterberg: "Theoretically, the field in which psychotherapy may work on both mental manifestations and bodily functions is a broad and interesting one, but is still open to little real understanding. The explanation has essentially to rest on the acceptance of a given physiological apparatus, for instance, on the blood vessels, or the glands of a certain region, their activity being stimulated by suggestion with or without hypnotism."

As this is a day when all minds are in search of the laws governing hidden forces, Chapter IV will be of interest, the general utility of suggestion being its subject. "Step by step," Munro says, "humanity is entering upon the field of new forces; electricity, for instance, is used widely for the comfort and health of man. A hidden force, man's evolution has been in proportion to his advancement in the sciences. Suggestion controls hidden laws and is used by the regular physician every day in his winning the confidence of his patient and so aiding in the desired effects of the treatment."

In Chapter V, hypnotism is demonstrated and in some respects new light is shed upon it. The writer has spent eight years in teaching and demonstrating to physicians all over the country, holding clinics in connection with other practitioners, giving physicians an opportunity to test their own ability to hypnotize and to treat under his directions. "The tendency of the logical mind of today," he says at the beginning of this chapter, "Is towards the acceptance of a philosophy that seeks for unity of mind, body and spirit. These are qualities of the individual, but, scientifically speaking, they are one and the same thing. Thus, monistic philosophy, or monism, recognizes that mind, spirit, and matter, soul and body, God and the world, are abstractions and not things in themselves, but are incomprehensively bound together in their separate oneness. Call this philosophy 'monism' or 'monotheism,' to suit yourself, but you cannot get away from the stupendous fact, even though our half-brained understandings and narrow experiences are unprepared to comprehend it, that the whole universe is animated by a single principle of life and mode of energy, and that such expressions as 'body,' 'mind,' and 'sprit,' are qualities of this one principle, thing or substance. But since it is impossible to think of any quality or thing except by comparison with something else, each one of these qualities should be held in equal appreciation." From this as a premise, Munro proceeds to consider the principles, problems and field of psychotherapy, showing the vital relation of the one principle to the cure of diseased cells, the principle which Herbert Spencer calls, "the eternal energy behind and within all things," the God in whom we live, move and have our being.

The psychotherapeutic value of suggestion is discussed in Chapter VIII and cases are reported, illustrating the author's method. The physician who knows the true powers of drugs and has confidence in them can assist their action by suggesting to his patient what to expect. Munro tells of giving a colored cook on his father's plantation a clay pill rolled in flour. It looked like one of the compound cathartic pills that the old doctor was accustomed to give and had the same effect on the patient.

Hypnotism, therapeutically applied, is the subject of Chapter IX, and will be a revelation to any reader not familiar with its workings, fully repaying him for the time spent in reading it.

Chapter X shows the use of suggestion in every day practice, and is illustrated by twelve cases commonly met in daily rounds.

Chapter XI gives practical points useful to those not following suggestive treatment, and one can gain valuable knowledge by reading it with an unbiased mind. It tells why our new drug competitors flourish so among us; this is our own fault—they do what we do not do, but what we could do if we would.

Chapter XII is the most useful to surgeons as it treats of the use of suggestion in anesthesia. If the mortality from chloroform and ether is correctly shown by statistics, the report of Alice Magaw, Dr. Mayo's anesthetist and the greatest anesthetist in the world, is a revelation as to the use of suggestion in this connection. By employing suggestion, from three to five minutes only are required to anesthetize the patient for operation. Miss Magnaw and Miss Henderson, her colleague at St. Mary's Hospital, Rochester, Minn., have used this plan for over ten years and they use from one-tenth to one-fifth of th eamount of chloroform or ether used by others.

In Chapter XIII, Munro takes up the subject of the use of suggestion during gestation, its effect on the mother and on the disposition of the child. Suggestion in this sense takes the place of the awful suggestions made by meddlesome friends and neighbors. It makes the entire period one of joyful expectation instead of one of dread.

Chapter XIV treats of the use of suggestive therapeutics during confinement, and shows how the need of forceps is lessened where time is given nature to do its work, in place of a doctor. Munro uses very little chloroform when any is required. The technic, as he gives it, is complete and easily grasped by the reader; when once followed it is never departed from by a doctor.

Chapter XV, on sexual instinct, is as good as any I ever read and is worth reading, though long. It touches on all phases of domestic life and morality. To all who have children under their care, whether they be parents, teachers, or physicians, it will be beneficial.

Chapter XVI, dealing with the treatment of psycho-neuroses, begins with a quotation from Professor Putnam, of Harvard Medical School, as voicing the up-to-date method of considering this class of cases. He recommends treating patients of this type as one would treat reasonable beings, possessing consciousness and independent wills, capable of intelligent co-operation. As our knowledge of mental life becomes more accurate, the tendency is to search deeper for the cause of the distressing symptoms, whether it lies in the environment of the patient, or in habits, instincts, or experiences dating back to childhood. Freud, Breuer, Prince and others have developed a method of diagnosis and treatment by laying bare the pathological mechanisms underlying the manifestations presented in the patient. Their technic is known as psychoanalysis. Munro gives Freud of Vienna the credit for developing this form of procedure given to the medical profession, and thinks it is the most important step in the evolution of this plan of treatment. Freud's psychology harmonises with Munro's in many points, but the technic of employing suggestions, as a means of detecting and remedying previous suggestions, or "psychic traumas," as he calls them, is Freud's alone. Munro's analysis of Freud's methods is interesting, but the length of the treatment in many of his (Freud's) cases, Munro says, would not be endured in this country, some cases requiring daily visits for two or three years. These cases are mostly hysterical neurasthenics, with repressed sexuality influenced by some previous experience, which experience must be discovered to get the best results, Freud says. Dream analysis, as throwing light on former experiences, is also dealt with in this chapter.

Training the subconscious self is the subject of Chapter XVII and is treated scientifically. Munro has confidence in his belief, as is seen in this chapter, which must be read carefully to get the exact meaning.

In Chapter XVIII, Munro tells us one must diagnose correctly if he would not blunder in treatment, to which all will agree.

In Chapter XIX, he gives us his ideas of philosophy and religion as related to health. His views are clearly stated, and most of us will agree with them, as (for example) with the statement that differences of opinion, when brought into a family, are apt to break the harmony of the matrimonial relations, besides injuring the health of husband and wife.

Conservation of energy is the subject of Chapter XX, and all will agree that this is the prime factor in the prevention as well as in the cure of disease. A careful attention to breathing, eating, exercise, with a plentiful supply of pure water added, gives the basis of the successful physician's treatment.

Munro, in Chapter XXI, treats of "Roughing it" as a means of health, and mentions a case where financial reverses turned a seeming invalid, a moping, inactive creature, dependant on rich relatives, into an active worker for his daily bread. Incidentally, this man, without the help of medicines, regained his health.

Chapter XXII shows the effect of a cheerful face and confidential bearing on the patient and his family, inspiring them with a belief that recovery is possible.

Chapters XXIII and XXIV treat of personality and environment, both along the same line, and Chapter XXV is concerned with brutality and frankness, both, at times, effective for good or evil.

Chapter XXVI, on "Moral Stamina—A Therapeutic Power"; Chapter XXVII, on "Suggestion in Education," and Chapter XXVIII, on "Self-Mastery as a Fine Art" are well written and instructive, repaying one for a thorough study if teaching or lecturing.

Chapter XXIX completes the subject as found in the former edition, and is a fine ending. Read it carefully. "The Tie that Binds and the Urge that Drives" is its title.

Chapter XXX is one entirely new, written by the author at the request of dentists who were students in his classes and who saw the possibilities of suggestion in the dental profession. Suggestion can be used every day in general dentistry.

Taken as a whole, the book is one that will repay careful study if one is interested in the subject of suggestive therapeutics.

DISEASES AND DEFORMITIES OF THE FOOT

DISEASES AND DEFORMITIES OF THE FOOT. By John Joseph Nutt, B.L., M.D., Surgeon in Chief, N. Y. Hospital Crippled and Deformed Children; Orthopedic Surgeon Willard Parker Hospital, New York. 8vo., 105 illustrations and plates. E. B. Treat & Co., 241 West 23d Street, New York.

THIS little book is written primarily for the general practitioner, and is certainly very readable. Used for reference, it stands ready to furnish the symptoms or treatment of nearly every ailment of the foot. The pathology in brief, the essential factors in etiology, the early recognition, the reasons for corrective procedures are all clearly stated. The descriptions of operations are given with considerable detail, enabling the student who has not seen them performed to follow very accurately,—as, for example, Dr. Whitman's operation of astragalectomy. The opening chapter on Anatomy and Physiology, while rather technical in places, is written with the design of giving the reader a better understanding of the mechanical principles upon which the physiological action of the foot depends. The proper methods of examination, showing the departure from the normal in action and at rest are then carefully described. Weak foot is given the space its importance and frequency demand, not only the typical marked case, but particular emphasis being laid on the early stages. Infantile paralysis, as affecting the foot, with its resulting deformities, is treated of both from a preventive and corrective viewpoint—correction by mechanical means and operation being shown. Tuberculous and toxic affections comprise the remainder of the patholölgical conditions, except for a chapter on various common ailments such as hallux valgus and hammer toe. The treatise is closed with an interesting chapter on foot apparel.

Charles Dwight Napier.

TREATISE ON FRACTURES

TREATISE ON FRACTURES. By John B. Roberts, A.M., M.D., F.A.C.S., and James A. Kelly, A.M., M.D. Illustrated. Phila. and Lond.; J. B. Lippincott Co., 1916. 677 pp., 8vo. Cloth, $6.00.

THIS new work, well illustrated by over 900 drawings, radiographs and photographs, is a convenient volume of about 675 pages. One-fourth of the book is devoted to general considerations and the operative treatment of fractures. In twenty-five subsequent chapters, regional fractures, beginning with fractures of the cranium, are consecutively and systematically discussed. The book is concluded with a consideration of birth fractures and gunshot fractures.

The authors have attained their desired object in presenting a clear, concise and systematic treatise. The various fractures which occur in each bone are well classified. Carefully compiled statistics are quoted from large series of cases. Their ideas of symptoms, diagnosis, prognosis and treatment reflect the best present-day opinions and methods. Displacement of fragments and the various kinds of retentive apparatus are graphically shown. This book really teaches. General practitioners and internes will profit by reading this book. To follow the teaching contained in this volume will start the reader upon the right path.

In the final analysis one is impressed by the profusion of illustrations, the practical character of the book and the sound conservative treatment of the subject by clinicians of great experience. The authors have added an excellent book to literature. R. H. F.

AN INTRODUCTION TO BACTERIOLOGY FOR NURSES

AN INTRODUCTION TO BACTERIOLOGY FOR NURSES. By Harry W. Carey, A.B., M.D., former Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, N. Y.; Associate in Medicine, Samaritan Hosp. and City Bacteriologist, Troy, N. Y. F. A. Davis Co., Publishers, Phila., Pa. English Depot, Stanley Phillips, London, 1915. Price $1.00 net.

THIS is a concise little book, not too deep for the purpose for which it is intended, and fills a decided and long-felt want in our curriculum in the training of up-to-date nurses. It embraces a good scope of bacteriology of a practical sort, and also in plain and impressive language instructs along the lines of sanitation, prevention of infectious diseases, and kindred subjects of interest. The book should become a decided favorite in our hospital teaching.

L. Koempel, M.D.

A HANDBOOK OF INFANT FEEDING

A HANDBOOK OF INFANT FEEDING. By Lawrence T. Royster, M.D. Illustrated. St. Louis, C. V. Mosby Co., 1916. 144 pp., 12mo. Cloth, $1.25.

IN the preface the author says: "The purpose of this book, then, is to furnish the essentials and only the essentials of infant feeding in a compact and succinct form.

"The desirability of expressing the elements which go to make up the infant's dietary in the form of approximate percentage has been emphasized. It is not claimed by any advocate of this method of expression that it does more than approximate accuracy. To attain an accurate percentage would require the services of an expert chemist in a well regulated laboratory. The exact composition of each quantity of milk would have to be determined and the ingredients combined by weight and not by volume. The value of the percentage method of expression lies in the fact that it enables us to reduce or increase the various food elements with approximate accuracy in accordance with the needs of the infant.

"The author realizes the fact that the book contains many imperfections, and that the specialist in diseases of children will find nothing in it new or original, but he hopes that those into whose hands it may fall will remember the purpose of the book and the needs of those for whom it was written, and that it may not be viewed with a too critical eye."

Rarely does one find an author who can value his own work as accurately as this author has done. It is, therefore, with this value in mind that the following thoughts are selected as typical of the general trend of the book.

As the ideas contained in the following paragraph are so sound they are quoted at length: "In the light of these observations no argument is necessary to make us use every endeavor to keep the child at the breast as long as is practicable, and during certain acute illnesses to supply human milk from another source at any cost. One of the most valuable assets in the child life of any community is a wet nurse register which may be established under conditions outlined by several observers. When it is not possible to use maternal feeding exclusively, or to substitute a wet nurse, we may resort to mixed feeding because even a small amount of human milk will cause the infant to assimilate a modification of cow's milk very much better."

And again: "Regardless of how the infant is fed, whether on simple dilutions of whole cow's milk or by the use of so-called top milk, or by means of milk, cream and water, the physician should always be able to state, at least approximately, the percentage of fat, carbohydrate and proteid which is given the infant in the 24 hours, for only by this means can be determined, and by an intelligent examination of the stools, the amount of vomiting, etc., what element is causing trouble and thereby be enabled to adjust accurately the amount of the particular element."

In regard to sterilization and pasteurization of milk the author says: "Primarily both of these procedures are useful where the purity of the milk supply is in doubt, and when this is the case I invariably pasteurize or boil the milk." One wishes that the author had taken this opportunity to emphasize the importance of pure raw milk for the baby, because this goal is worth striving for strenuously in spite of the attitude of health departments to the contrary.

In another place he says: "I have never seen scurvy develop in the course of feeding on boiled milk though whenever this is used the attending physician should be constantly on his guard." It is difficult to explain this statement of the author's. It is not an infrequent occurrence to have scurvy develop right in the hospital ward under constant supervision when by some mistake a baby is fed on boiled milk for any length of time. Two explanations of the statement are at hand. The first is that the babies so fed and coming under the author's observation have had other food which would prevent the development of scurvy, or else the scurvy has been unrecognized.

Perhaps the most valuable feature of the book is the chapter on "The Stools in Infancy," by John Lovett Morse, M.D. This often neglected examination in the feeding of infants is here fully explained, and the methods and results of examination are such that they are easily within the ability of any physician who is willing to spend the time in ascertaining the data on the stools, which help so much in the feeding of infants.

In the chapter on "Breast Feeding," the author is doing his part to encourage the physician to use all breast milk possible. Even if not sufficient for the exclusive food of the baby, whatever breast milk we can use should be used, whenever practicable.

The chapter dealing with the premature baby shows the author to have had considerable experience in the handling of these delicate organisms, and the following of his methods to the letter will be crowned with success in any case that is at all savable.

To sum up then, while one may differ with the author in the details of his method of artificial feeding, and many simpler methods of obtaining the formulae can be pointed out, and while one may doubt the value of algebraic formulae with x as the unknown quantity in working out formulae, we can unhesitatingly endorse the general principles enunciated, and can highly recommend the book for elementary use in infant feeding.

ARCHIBALD D. SMITH, M.D.

CANDY MEDICATION

CANDY MEDICATION. By Bernard Fantus, M.D. St. Louis, C. V. Mosby Co., 1915. 82 pp., 12mo. Cloth, $1.00.

THIS little book is a work on drugs which are made up so as not to offend the taste. It gives a detailed description of the fabrication of fifty-eight tablets. It should be useful to the manufacturer of tablets but would seem too complicated for general use by the practitioner. P. L. P.

OBSTERICS: NORMAL AND OPERATIVE

OBSTETRICS: NORMAL AND OPERATIVE. By George Peaslee Shears, B.S., M.D. Professor of Obstetrics and Attending Obstertrician at the New York Polyclinic Medical School; formerly Instructor in Obstetrics, Cornell University Medical College; Attending Obstetrician at the New York City Hospital; Senior Attending Obstetrician at the Misericordia Hospital. 419 illustrations. 745 pages. J. B. Lippincott Co., 1916. Price, $6.00.

THE critic, at best, gives his personal opinions of a given subject. It matters not whether the subject be vers libre, cubist painting, or the latest play. What he condemns may be viewed in a different light by the next person; that which he praises may be held as so much trash by the majority. This, also, pertains to the review of a book. To do his duty, be free from bias, and advise a prospective purchaser to the best of his honest judgment covers the field and is as far as a reviewer dare go.

It seems, although we know it is not so, a new work on obstetrics appears about every third day. And a pertinent characteristic of these new works is that one is a fac simile of the others that, in the large majority, have appeared in the past. So similar are many of these efforts that one wonders who really was the original author. No doubt, if one was of a curious turn of mind and made it his business to sift the matter to its source, he would find the first author of what are called modern obstetrics lived sometime prior to the Dark Ages. Concerning the illustrations as done in most obstetrics the same would apply. When one opens the newest book on midwifery he speculates to himself just how many times before he has seen the illustrations and where, and, lest we close our eyes to the truth, we must admit that speculation bears out the fact he has seen the illustrations repeated in nearly every work since he was the owner of a text-book on obstetrics during his student days.

And so when the reviewer opened Dr. Shears' new book and contemplated the task before him it was with the feeling hé would have much to hold up to gentle ridicule. The first impression he gained was that the paper was exceptionally good in quality. This was followed by realizing, in a subconscious manner, that the type was clean, clear and easy to read.

Next we glanced through the illustrations. We were pleasantly surprised. True, a few of the ancient ones were present as if adding a tone of respectability to the others which, and they were in the large majority, the author tells us have been gathered from the best works in this country and abroad. These illustrations are exceptionally good. After becoming aware of this fact we wondered why we were impressed. The answer was easy. They were not put in to fill up or pad. Every illustration serves a definite purpose which is as it should be. They aid the text which is the aim of every drawing or photograph.

The matter of illustrations finished we turned to the contents. The first part deals with the normal. There are chapters on pregnancy, labor and the puerperium; the diagnosis and clinical phenomena on pregnancy; the management of pregnancy; the antepartum examination; the foetus in utero; the physiology and mechanism of labor; the diagnosis and clinical phenomenon of labor; the management of labor; the physiology and clinical history of the puerperium; the management of the puerperium; and, multiple pregnancy and labor.

One will note there are missing the usual chapters on anatomy and embryology, which, the author says, is a science in itself and should be treated as such in a separate work. Irrelevant matter, Dr. Shears writes in his preface, is given too much space in most obstetric works, and too little space is devoted to the practice of obstetrics.

Part two deals with pathology of pregnancy and labor. It takes up local and general disorders of the mother; intercurrent affections; the premature interruption of pregnancy; extra-uterine pregnancy; anomalies of the foetus and its appendages; anomalies of the excellent forces; malpositions and malpresentations of the foetus; foetal mortality in labor; lacerations of the genital tract during labor; the puerperal hemorrhages; contracted pelvis.

Part three deals with obstetric surgery, covering general technic of obstetric operations; procedures designed to overcome the resistance of the cervix; the inductions of abortion and of premature labor; the forceps; version; the Caesarean section; symphysiotomy and pubiotomy; and, embryotomy.

Part four covers the pathology of the puerperium. There are chapters on puerperal infection; affections of the breasts and nipples; other complications of the puerperium.

From this outline it is seen the book covers the field and in a thorough manner.

It is a readable book. It is presented in an interesting manner. The author has an appreciation of word values. Most authors, in their zeal to be technical, accurate and scientific, fail to realize that some one must read the work and the majority of these some ones the busy general practitioners in the city and his brother workers of the rural districts.

Dr. Shears' book will prove worth while to the specialist of obstetrics. It will prove valuable to the general practitioner.

In the opinion of the reviewer to purchase this book would be six dollars well spent, and a purchase that will not be regretted.

Would there were fewer books published and more books as well done as the Obstetrics as written by Dr. George Peaslee Shears.

T. S. W.

HANDBOOK OF VENESECTION

VENESECTION. A Brief Summary of the Practical Value of Venesection in Disease. For Students and Practitioners of Medicine. By Walton Forest Dutton, M.D. Illustrated. Phila., F. A. Davis Co., 1916. 220 pp., 8vo. Cloth, $2.50.

THIS pleasing little work is much more than a mere dry description of the technic and indications for bloodletting as it gives a concise and scientific resume of the treatment of the conditions in which this procedure may be of service.

Chapters are presented on the history of bloodletting, on the blood and lymph, on hematology and on bloodpressure before going on to the actual consideration of the technic and indications for the removal of blood from the system either with or without the replacing thereof by saline or other solutions.

Cupping in its various forms is taken up with a description of the apparatus required for its practice.

Many of the statements made are supported by the opinion of authorities a bibliography of whom is appended and further a commendable feature of the index is the inclusion therein of the names of the writers quoted in the text.

On the whole it may be said that this volume is much more than is to be inferred from its title and it is really a valuable little handbook of medicine which may be read with benefit by any general practitioner.

W. H. DONNELLY.

ELEMENTARY BACTERIOLOGY AND PROTOZOOLOGY

ELEMENTARY BACTERIOLOGY AND PROTOZOOLOGY. For the use of nurses. By Herbert Fox, M.D. Second Edition, Revised and Enlarged. Illustrated. Phila. and New York, Lea & Febiger, 1916. 251 pp., 8vo. Cloth, $1.75.

THIS little volume is one of a series of text-books for nurses, and it may be said to fulfill its object quite satisfactorily inasmuch as the author has succeeded in presenting quite as much material on the subject as the average nurse requires, and this has been accomplished without the use of too many technical terms which might prove hard reading for beginners.

The general principles of bacteriological study are gone into, then sterilization and disinfection are taken up, followed by a description of the preparations for and the obtaining of specimens from the patient for examination.

Bacteria are then taken up under three heads: those causing acute, self-limited infections; those causing the more chronic infectious diseases; and those not associated with any specific clinical disease. Yeasts and moulds; bacteria in air, soil, water, and milk are next considered. The work concludes with a chapter on protozoa, and one on diseases of unknown etiology.

Commendable features of the book are the special attention given to the methods of transmission of the infectious diseases, the absence of unnecessary technical material, and the provision of a glossary of terms which might present difficulty when encountered in the text.

W. H. DONNELLY.

THE MORTALITY FROM CANCER THROUGHOUT THE WORLD

THE MORTALITY FROM CANCER THROUGHOUT THE WORLD. By Frederick L. Hoffman, LL.D., F.S.S., F.A.C.A. Newark, N. J., The Prudential Press, 1915. 826 pp., 8vo. Cloth.

THE author, a statistician widely known for his painstaking work, has gathered together and incorporated in a volume of nearly 800 pages the world's statistical data in reference to the cancer problem. As is stated in the preface, "the work is primarily intended to facilitate the statistical study of the cancer problem throughout the world"; and to further stimulate interest in this stupendous work the publishers have distributed gratuitously many copies of the book to medical libraries, to members of the medical profession, and to many others especially interested in the study of the cause and control of cancer.

The volume is divided into nine chapters, twenty-one charts, eight appendices, and a lengthy bibliography. The reading matter proper deals with the following subjects: The statistical method in medicine; the statistical basis of cancer research; the increase in cancer; mortality from cancer in different occupations; cancer as a problem in life insurance medicine; the geographical incidence of cancer throughout the world; the statistical data of cancer frequency in American states and cities; in foreign countries; and, finally, some general observations and conclusions on the cancer problem.

The remainder of the volume is given over to the charts and appendices, containing innumerable tables, which give the statistical data gathered from all parts of the world, but particularly from continental United States, and lastly, a very long, though not complete, bibliography.

The work is very interesting and readable and should render substantial assistance to all those interested in the cancer problem, especially statisticians, lecturers and teachers. HARRY B. MATTHEWS.

A TEXT-BOOK OF FRACTURES AND DISLOCATIONS

A TEXT-BOOK OF FRACTURES AND DISLOCATIONS, with Special Reference to Their Pathology, Diagnosis and Treatment. By Kellogg Speed, S.B., M.D., F.A.C.S. Illustrated. Phila. and New York, Lee & Febiger, 1916. 888 pp., 8vo. Cloth, $6.00.

IN this new work upon fractures and dislocations Speed presents much clinical and statistical material obtained from the large service at the Cook County Hospital, Chicago. He has combined with his own ideas and experience much helpful information culled from literature.

The author's references to the work of others is a gratifying feature. A large amount of labor has been thoughtfully expended by author, roentgenographer and artist. There are many instructive X-ray tracings and diagrams. The illustrations number 656. It is a broad, comprehensive, useful and inclusive book. The task has been well done and it deserves a warm welcome. The sound judgment, the modern conservative teaching which characterize this volume should place it among the highly authoritative works upon this subject. ROYALE H. FOWLER.

THE PRACTICAL MEDICINE SERIES

THE PRACTICAL MEDICINE SERIES, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Charles L. Mix, A.M., M.D. Illustrated. Series 1916. Chicago, The Year Book Publishers, 1916-1917. In 10 vols. 12mo. Cloth, $10.00 per set.

THIS series of year books, having been published for the past sixteen years, are becoming each year increasingly more useful to the busy practitioner and surgeon. Ten volumes are published each year designed to cover the entire field of medicine and surgery. Each volume takes up a special subject, edited by leading specialists, and makes it possible for the specialist to obtain at a very moderate cost, the single volume in which he is particularly interested. The literature of the year, prior to the date of publication of the series, is reviewed and well selected abstracts are made in concise form, giving the reference to the original article in each instance. The books are well printed in type, easily read, and illustrations, where necessary, are reproduced from the original articles, giving additional value to some of the papers summarized. A complete author and subject index is to be found in each volume. The size of the volumes makes it convenient for them to be carried in the pocket and the spare time in riding about can thus be utilized in keeping abreast of the more recent progress being made in medicine. The volumes are divided as follows:

I. GENERAL MEDICINE. Edited by Frank Billings, M.S., M.D. 384 pages. Cloth, $1.50.

The Table of Contents includes Infectious Diseases, Diseases of the Chest, Diseases of the Heart, Diseases of the Blood Vessels, Diseases of the Blood and Blood-Making Organs, Diseases of the Ductless Glands. Metabolic Diseases, Diseases of the Kidneys, and Poisoning.

II. GENERAL SURGERY. Edited by John B. Murphy, A.M., M.D., LL.D., F.R.C.S. England (Hon.), F.A.C.S. 620 pages. Cloth, $2.00.

Contents: Anesthesia, Analgesia, X-ray, New Instruments, Asepsis and Antisepsis, Treatment of Infected Wounds, Operative Technic Amputations, Wound Healing and Pathologic Interventions, Gas Gangrene, Tetanus, Malignant Tumors, The Blood Vessels, The Bones, The Joints, The Nerves, The Skull and Brain, The Face and Mouth, The Neck, The Thyroid and Thymus, The Mamma, The Thorax, Abdominal Surgery (General), The Peritoneum, The Mesentery, The Stomach and Duodenum, Intestinal Surgery (General), The Intestines, The Vermiform Appendix, The Rectum, Hernia, The Liver, The Gallbladder and Bile-Ducts, The Pancreas, The Spleen, The Urinary Organs, The Spine and Cod, The Upper Extremity, The Lower Extremity.

III. THE EYE, EAR, NOSE AND THROAT. Edited by Casey A. Wood, C.M., M.D., D.C.L.; Albert H. Andrews, M.D.; George E. Shambaugh, M.D. 376 pp. Cloth $1.50.

Contents: The Eye, The Ear, The Nose and Throat (Diseases of the Nose, Diseases of the Throat).

IV. GYNECOLOGY. Edited by Emilius C. Dudley, A.M., M.D., and Herbert M. Stowe, M.D. 232 pp. Cloth, $1.35.

Contents: General Principles, Disorders of Menstruation, The Ovaries, Displacements and Injuries. Infections and Allied Disorders, Tumors, Sterility.

V. PEDIATRICS. Edited by Isaac A. Abt, M.D., with the Collaboration of A. Levinson, M.D. ORTHOPEDY SURGERY. Edited by John Ridlon, A.M., M.D., with the Collaboration of Charles A. Parker, M.D. 232 pp. Cloth, $1.35.

Contents: Pediatrics (in General) pp. 7-154; Orthopedic Surgery (In General) pp. 157-211.

VI. GENERAL MEDICINE. Edited by Frank Billings M.S. M.D., assisted by Burrell O. Raulston, A.B., M.D. 342 pp. Cloth, $1.50.

Contents: Infectious Diseases, Diseases of the Mouth and Esophagus, Diseases of the Stomach Diseases of the Intestines, Diseases of the Liver and Gall-Bladder. Diseases of the Pancreas.

VII. OBSTETRICS. Edited by Joseph B. De Lee, A.M., M.D., with the Collaboration of Herbert M Stowe, M.D. 230 pp. Cloth, $1.35.

Contents: Pregnancy Labor, The Puerperium, The New-Born. Obstetrics in General.

VIII. MATERIA MEDICA AND THERAPEUTICS. Edited by George F. Butler, Ph.G., A.M., M.D. PREVENTIVE MEDICINE. Edited by Wm A Evans, M.S., M.D., LL.D., Ph.D. 382 pp. Cloth. $1.50.

Contents: Drugs, Extracts of Animal Organs. Bacterial Preparations, Serums and Vaccines, Electricity. Roentgen Rays. Radium and Radio-Active Substances; The Physician and Public Health Work, General Sanitation, Personal Hygiene. Infant Welfare, Inspection of School Children, Infectious and

Contagious Diseases, Occupational Diseases, Military Hygiene.

IX. SKIN AND VENEREAL DISEASES. Edited by Oliver S. Ormsby, M.D., and James Herbert Mitchell, M.D. 238 pp. Cloth, $1.35.

Contents: Dermatoses, Genito-Urinary Diseases, Syphilis.

X. NERVOUS AND MENTAL DISEASES. Edited by Hugh T. Patrick, M.D., Peter Bassoe, M.D., with the Collaboration of Lewis J. Pollock, M.D. 232 pp. Cloth, $1.35.

Contents: Diseases of the Nervous System (Symptomatology, The Neuroses, The Cerebrospinal Fluid and Diseases of the Meninges, The Syphilitic Diseases of the Nervous System, Diseases of the Brain, Diseases of the Spinal Cord, Diseases of the Peripheral Nerves, Miscellaneous); Psychiatry (General Considerations), Alcoholism, Catatonia, Dementia Praecox, Paretic Dementia, Paresis, Paraphrenia, Paranoia Manic-Depressive Insanity, Idiocy.

THE PRACTICAL MEDICINE SERIES, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery, Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Illustrated. Series 1917. Chicago, The Year Book Publishers, 1917. In 10 vols. 12mo. Cloth, $10.00 per set.

I. GENERAL MEDICINE. Edited by Frank Billings, M.S., M.D., assisted by Burrell O. Raulston, A.B., M.D. 383 pp. Cloth, $1.50.

Contents: Research Work, Experimental Medicine and Laboratory Technique, Infectious Diseases, Diseases of the Chest, Diseases of the Heart, Diseases of the Blood Vessels, Diseases of the Blood and Blood-making Organs, Diseases of the Ductless Glands, Diseases of Metabolism, Diseases of the Kidneys. Poisoning.

II. GENERAL SURGERY. Edited by Albert J. Ochsner, M.D., F.R.M.S., LL.D., F.A.C.S. 608 pp., Cloth, $2.00.

Anesthesia, Analgesia X-ray, Radiotherapy, New Instruments, Asepsis and Antisepsis, Treatment of Infected Wounds, Operative Technic, Amputations, Wound Healing and Pathologic Interventions, Gas Gangrene. Tetanus Malignant Tumors, The Blood Vessels, The Bones, The Joints, The Nerves, The Skull and Brain, The Face and Mouth, The Esophagus, The Neck, The Thyroid, The Mamma, the Thorax, Abdominal Surgery (General), The Peritoneum, The Stomach and Duodenum, Intestinal Surgery (General), The Intestines, The Vermiform Appendix, The Rectum. Hernia, The Liver, The Gallbladder and Bile-Ducts, The Pancreas, The Spleen. The Kidney and Bladder, The Spine and Cord. The Upper Extremity. The Lower Extremity.

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IV. GYNECOLOGY. Edited by Emilius C. Dudley, A.M., M.D., and Syney S. Schochet, M.D. 232 pp. Cloth, $1.35.

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Contents: Pediatrics (in General), pp. 5-148; Orthopedic Surgery (The Spine, The Upper Extremity, The Lower Extremity, War Orthopedics, Miscellaneous). C. F.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases review notices will be promptly published shortly after acknowledgment of receipt has been made in this column.

A PRACTICAL TREATISE ON DISORDERS OF THE SEXUAL FUNCTION IN THE MALE AND FEMALE. By Max Hühner, M.D. Phila., F. A. Davis Co., 1916. 318 pp., 8vo. Cloth, $3.00.

HOMŒPATHIC THERAPEUTICS IN OPHTHALMOLOGY. By John L. Moffat, B.S., M.D., O. et A. Chir. Phila., Boericke & Tafel, 1916. 166 pp., 12mo. Cloth, $1.25.

CARE OF PATIENTS UNDERGOING GYNECOLOGIC AND ABDOMINAL PROCEDURES, Before, During, and After Operation. By E. E. Montgomery, A.M., M.D., LL.D., F.A.C.S. Illustrated. Phila. and Lond.: W. B. Saunders Co., 1916. 149 pp., 8vo. Cloth, $1.25.

A MANUAL OF NERVOUS DISEASES. By Irving J. Spear, M.D. Illustrated. Phila. and Lond.: W. B. Saunders Co., 1916. 660 pp. 12mo. Cloth, $2.75.

THE PRACTICAL MEDICINE SERIES. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Series, 1916. Vol. 4. GYNECOLOGY. Edited by Emilius C. Dudley, A.M., M.D., and Herbert M. Stowe, M.D. Illustrated. 232 pp., 12mo. Cloth, $1.35. Vol. 5. PEDIATRICS. Edited by Isaac A. Abt, M.D., with the Collaboration of A. Levinson, M.D. ORTHOPEDIC SURGERY. Edited by John Ridlon, A.M., M.D., with the Collaboration of Charles A. Parker, M.D. Illustrated. 232 pp., 12mo. Cloth, $1.35. Vol. 6. GENERAL MEDICINE. Edited by Frank Billings, M.S., M.D., assisted by Burrell O. Raulston, A.B., M.D. Illustrated. 342 pp., 12mo. Cloth, $1.50. Vol. 7. OBSTETRICS. Edited by Joseph B. De Lee, A.M., M.D., with the Collaboration of Herbert M. Stowe, M.D. Illustrated. 230 pp., 12mo. Cloth, $1.35. Vol. 8. MATERIA MEDICA AND THERAPEUTICS. Edited by George F. Butler. Ph.G., A.M., M.D. PREVENTIVE MEDICINE. Edited by Wm. A. Evans, M.S., M.D., LL.D., Ph.D. 382 pp., 12mo. Cloth $1.50. Vol. 9. SKIN AND VENEREAL DISEASES. Edited by Oliver S. Ormsby, M.D., and James Herbert Mitchell, M.D. Illustrated. 238 pp., 12mo. Cloth $1.35. Vol. 10. NERVOUS AND MENTAL DISEASES. Edited by Hugh T. Patrick, M.D., Peter Bassoe, M.D., with the Collaboration of Lewis J. Pollock, M.D. Illustrated. 232 pp., 12mo. Cloth. $1.35. Chicago, The Year Book Publishers, 1916-1917. Series of 10 vols. $10.00.

PRACTICAL URANALYSIS. By B. G. R. Williams, M.D. Illustrated. St. Louis, C. V. Mosby Co., 1916. 139 pp., 12mo. Cloth, $1.25.

CLINICAL AND LABORATORY TECHNIC. By H. L. McNeil, A.B., M.D. St. Louis, C. V. Mosby Co., 1916. 88 pp. 12mo. Cloth. $1.00.

THE NEWER METHOD OF BLOOD AND URINE CHEMISTRY. By R. B. H. Gradwohl, M.D. and A. J. Blaivas. Illustrated. St. Louis, C. V. Mosby Co., 1917. 240 pp., 8vo. Cloth, $2.50.

HANDBOOK OF SUGGESTIVE THERAPEUTICS. APPLIED HYPNOTISM. PSYCHIC SCIENCE. A Manual of Practical Psychotherapy, Designed Especially for the Practitioner of Medicine, Surgery and Dentistry. By Henry S. Munro. M.D. Illustrated. Fourth Edition, Revised and Enlarged. St. Louis, C. V. Mosby Co., 1917. 481 pp., 8vo. Cloth. $5.00.

TRAUMATIC SURGERY. By John J. Moorhead, B.S., F.A.C.S. Illustrated. Phila. and Lond., W. B. Saunders Co., 1917. 760 pp., 8vo. Cloth, $6.50.

DISEASES OF THE STOMACH, INTESTINES AND PANCREAS. By Robert Coleman Kemp, M.D. Illustrated. Third Edition, Revised. Phila. and London, W. B. Saunders Co., 1917. 1096 pp., 8vo. Cloth, $7.00.

TEXT-BOOK OF OPHTHALMOLOGY. By Hofrat Ernst Fuchs. Authorized Translation from the Twelfth German Edition; Completely Revised and Reset with Numerous additions Specially Supplied by the Author, and Otherwise Much Enlarged by Alexander Duane. M.D. Fifth Edition. Illustrated. Phila. and Lond., J. B. Lippincott Co., 1917. 1067 pp., 8vo. Cloth, $7.00.

LOCALISATION ET EXTRACTION DES PROJECTILES. Per L. Ombrédanne et R. Ledoux-Lebard. Illustrated. Paris, Masson et Cie, 1917, 349 pp., 12mo. Paper 4 Francs.

IMPOTENCY. STERILITY AND ARTIFICIAL IMPREGNATION. By Frank P. Davis. Ph.B., M.D. St. Louis. C. B. Mosby Co., 1917. 138 pp., 12 mo. Cloth. $1.25.

ASTHMA. PRESENTING AN EXPOSITION OF THE NONPASSIVE EXPIRATION THEORY. By Orville Harry Brown A.B., M.D., Ph.D. With a Foreword by George Bock. Sc.D., M.D. Illustrated. St. Louis. C. V. Mosby Co., 1917. 330 pp., 8vo. Cloth $4.00.

EXPERIMENTAL PHARMACOLOGY. By Dennis E. Jackson, Ph.D., M.D. Illustrated. St. Louis, C. V. Mosby Co., 1917. 536 pp., 8vo. Cloth, $4.00.

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MEDICAL JOURNAL

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A CASE OF PANCREATIC DIABETES RELIEVED BY THE ALLEN TREATMENT.

Harris A. Houghton, M. D.

Bayside, Long Island.

AT the Autumn meeting of the Associated Physicians of Long Island, the details of this case of pancreatic diabetes were presented at a moment's notice, for the purpose of asking a question, viz., under what circumstances, if ever, can a cure be claimed for diabetes? Is it necessary to so shape our definitions of "cure" and "diabetes," that a true cure is impossible of attainment? Is it not a fact that the word diabetes should carry a conception broader than the usual one which was acquired in the years when treatment was less efficacious?

For clinical purposes, we are permitted to conceive of diabetes as a disease in which the capacity of the organism to utilize sugar is limited resulting from the non-secretion of the specific harmone usually liberated by the Islets of Langerhans in the pancreas. What specific toxine has the power of inhibition or a destructive effect on those cells, or from whence it is derived, or whether loss of secretion results from overwork, is not known. Syphilis often produces a pancreatitis which in turn results in pancreatic glycosuria. It is an analogous situation though the clinical course of the disease is slightly different.

The capacity for the utilization of sugar being strictly limited in different degrees in different cases, it follows that when the concentration of blood sugar reaches the "threshold" point, sugar will be found in the urine. At the same time, if carbohydrate has been sufficiently curtailed, the dietary also being deficient in calories, fat is incompletely oxidized and acidosis results. The "threshold point" varies in different individuals, and if in the presence of glycosuria, there is a low sugar concentration in the blood, one must regard the case as one approaching the standard set for the diagnosis of pure renal diabetes. In other words, the renal permeability for sugar varies somewhat for different individuals.

This point has also been proven, i. e. that many individuals with sugar-free urine, and with no history of previous glycosuria, have a high blood sugar. These individuals usually have low sugar tolerance, and may eventually develop true pancreatic diabetes, if due care is not exercised. Here is manifestly a diabetic tendency as exhibited by high sugar concentration of the blood.

The following case and clinical history is given to illustrate the point. From a clinical side it is a "cure." Nine months after treatment, she is eating sugar in moderate amount, the blood sugar stands at 125 mms per 100 cc blood, which is within the range of normal, and in other respects she is not paying much attention to her diet. If it were possible to test her sugar tolerances without danger, it would probably be found that the tolerance was low, but however low it is, it is high enough for her caloric needs.

Mrs. D———, aged 42 years, married, no children. The previous history and physical examination are negative for our purposes except in the following particulars: Nine months previous to period of treatment, sugar was accidentally discovered in the urine. For this she instituted no treatment until the symptoms of polyuria, thirst, and loss of weight compelled attention. She was eating no sugar but otherwise paid no attention to her diet. On physical examination it could be seen that this patient belonged to that type of diabetes associated with obesity. Another striking feature was the distincly masculine trend to the contour of the face. It reminded one of those cases of status thymicus (preadolescent) associated with hetero-sexual characteristics, which have been so well described by Haven Emerson. One could hardly claim that there was general disturbance of the chromaffin system, but the tendency was certainly in that direction.

Clinical Discussion

Diabetes and Syphilis—

During the course of the examination, it was discovered that the Wassermann reaction was negative. I know of no direct pathological evidence bearing on the subject, but it is certain that diabetes follows abdominal syphilis, and is conceivably caused by destruction of the Islets of Langerhans. The proportion runs about one-third in my series. Syphilitic diabetes runs a milder course apparently than true diabetes, and is handled much more easily by the Allen treatment than classical diabetes. No case of diabetes should be treated without availing onesself of the information which can be gained from a Wassermann reaction, in order that the diabetes and causative factor may be treated simultaneously. The power to assimilate sugar sometimes returns to an astonishing degree following anti-syphilitic treatment.

Diabetes and Nephritis—Every case of diabetes, sooner or later, develops nephritis, and the working capacity of the kidney in each case should receive special study. On this factor depends the prognosis in many instances, and there are many situations which arise in which the treatment should be modified in the presence of marked kidney incapacity. In this case, the phenosulphonephthalein excretion in two hours was 35 per cent. which would seem to indicate a low kidney capacity, assuming that the cardio-vascular system was intact. A much more reliable method of examination to determine kidney capacity is the MacLean Index, a modification of Ambard's coefficient, determined by coordination of coexistent blood and urinary examinations, the urea of both being a common factor. The normal index is 75. Uremia exists with any reading below 40. An index of 22 usually means coma and 16, death. Per contra, an index above 75 has the utmost significance. Mrs. D——— had an index of 176 and the interpretation of this may be said to be as follows: To yield such an index, the kidney must work about two and a half times harder than it normally does. In other words, something must have been irritating or goading it to this added load. It has already been stated that diabetes causes nephritis sooner or later, and we have here an example of the irritation of early diabetes before the irritation has led to incapacity, which would have shown itself by a low MacLean Index. In other words a high MacLean Index indicates a pre-nephritic stage; a stage in which the kidneys are being irritated to overwork. In a non-diabetic it means septic absorption from some point in the body, which if continued for months causes contracting kidney. In a diabetic, its significance lies in the fact that such a subject has suffered from diabetes for only a short time. In this connection it should be remembered that the normal end-products of protein metabolism as thrown off by the kidney are never irritating to that organ, no matter what the pressure concentration in the blood may be. The kidney is capable, for instance, of eliminating enormous amounts of urea without showing signs of wear and tear. Kidney irritations therefore must be laid to the abnormal products thrown off, and in the case of diabetes to the unoxidized organic acids, both free and in a combined state. Mrs. D——— had a high excess of urinary ammonia, which appears to substantiate the view just ventured.

Water Intake and Urinary Excretion—During the period of observation, Mrs. D——— had two periods of water retention. In both instances, the red blood cell index fell, and there was a real hydremia. In both instances, the condition was apparently relieved by diuretin.

Acidosis—Fortunately, the acidosis in this case was slight. The urine remained acid for two days after the exhibition of sodium bicarbonate. Of much greater value, however, in the determination of the acid-alkali equilibrium of the body, is the determination of the CO_2 of the blood plasma by the Van Slyke apparatus. The sodium carbonate content of the plasma is normally fixed. In acid conditions it is the third and last line of defense against circulating acids. A diminished amount of sodium carbonate in the blood therefore, represents encroachment of acids, and is measured in terms of CO_2 broken off from the sodium carbonate of the blood. This index normally is 75. Coma usually supervenes when the index reaches 25. The index in the case of Mrs. D——— was 52 at the end of the starvation period. This denotes only slight encroachment of acid, and at that was probably more due to the partial utilization of body fats in the absence of carbohydrate rather than to a true diabetic acidosis. The presence of an acidosis in diabetes means that fatty acids are not oxidized to normal end-products, this failure to oxidize being due to the absence of adequate supply of carbohydrate, essential for the normal terminal oxidation of fat. Starvation acidosis has the same genesis and the same causes, the difference being only in the fact that the fats of the body are being utilized as well as it is possible for the body to utilize them, without any carbohydrate intake to help in the process. In this case carbohydrate was furnished after the fast and the acidosis index (Co_2 of the blood) rapidly rose to approximately normal.

The Sugar of the Blood and of the Urine—The sugar of the urine was 4½ per cent at the beginning of the period of observation. A knowledge of the total amount of sugar passed in 24 hours would have been of value in this connection but the figures cannot be furnished. On the fourth day of the fast, the sugar disappeared from the urine and has never returned. At the close of the fast, the sugar of the blood was 158 mgm per 100 cc of blood, and the second day after the exhibition of food, it stood at 240—a true diabetic reaction to carbohydrate intake. At the close of the period of observation, there was 150 mgm per 100 cc blood—an extremely interesting phenomenon inasmuch as it shows that there was a true recovery of the power of the body to utilize carbohydrate in spite of the increasing carbohydrate intake. As has been stated there is no threshhold point at which the concentration of the blood sugar necessarily signifies that sugar will appear in the urine. This depends on kidney permeability for sugar, which always varies in different cases and probably, if periods of time are considered, varies in individuals.

The Dietary Management of Diabetes—This case presented no special difficulties as regards the dietary management. During the treatment one day's fast was given, more on account of a general feeling that it would be wise rather than for any definite reason. The food of course was carefully weighed each day, starting with the usual green vegetables, and made up in 24-hour lots. The time necessary to reach 2500 calories was shorter than usual because the blood sugar was coming down. The usual effort was made to protect the fat intake by a relatively liberal supply of carbohydrate. It is believed that the values of food stuffs given are within 8 to 10 per cent of the actual values. At the close of the period of observation, the patient was getting 2511 calories. The protein intake was 81 grammes, which was well over Chittenden's minnimal standard.

Present Condition of the Patent After Eight Months—This patient is now using sugar in moderate amounts, and is paying otherwise little attention to her diet. There is no sugar in her urine and the blood sugar is 125 mgm per 100 cc blood, only slightly over normal. She has no symptoms. There has been a gain in weight following the loss due to treatment, and she is now at normal. She describes her own feelings as full of "pep," and states that her duties which are somewhat arduous are met and accomplished each day with joy in the sense of living.

VASCULAR DISTURBANCES OF THE EXTREMITIES.

Warren L. Duffield, M.D., F.A.C.S.

Brooklyn, N. Y.

HAVING recently had two patients, and more remotely a number of patients suffering with vascular disturbances of the extremities the literature on the subject was reviewed. This paper is presented with an apology—it contains nothing new and is but a brief and imperfect summary of what has been written within the past few years.

Either there are a number of closely allied conditions affecting the blood vessels of the extremities, particularly the lower, or else we have described for us different stages of the same condition under a variety of names. Endarteritis obliterans, thrombo-angiitis obliterans, Raynaud's disease, presenile gangrene, erythromelalgia are but some of the terms used to designate several distinct clinical entities or else stages of the same disease.

Collins classifies and tabulates the above conditions and draws attention to their points of difference. The following remarks are largely quoted from his article.

(Read before the Brooklyn Surgical Society Nov. 1st, 1917.)

Erythromelalgia was first described by Weir Mitchell in 1872. It is rare, only about 150 cases having been reported. The initial symptom is pain, confined to a more or less clearly defined area, lasting for several hours, subsiding to return at fairly regular intervals. Warmth increases the pain and cold soothes it. Pain may be the only symptom but is usually accompanied by reddening, particularly whenever the limb is pendent, to disappear on elevation. Gangrene does not occur. Weir Mitchell believed it to be a neuritis of the nerve endings.

Intermittent claudication, or to use the more descriptive term used by Erb, dysbasia angioscelrotica intermittens, is due to some form of arteriosclerosis and Hunt pictures the condition as one where the diminished calibre of the vessels serves to supply the parts with sufficient blood only during repose but the increased demand of exertion causes a reflex spasm of the vasoconstrictors further diminishing the blood supply. During the attack the affected part is waxy in appearance and cold to the touch. The absence or diminuition of pulse with pallor and coldness of the limb, as compared with the heat, redness and increased pulsations of erythromelalgia, should clearly differentiate between the two.

The most common of these conditions under consideration is endarteritis obliterans, named by Buerger ,thrombo-angiitis-obliterans. This disease is quite commonly found among the Russian Hebrews, particularly the young adult males. Pain, cyanosis and gangrene are its symptoms. The lower extremities are most frequently affected but the hands and arms do not escape. Buerger has made a most careful study of this disease and has shown that the calibre of the vessels is diminished not by a proliferation of the intima or media but by a distinct thrombosis usually of the arteries and at times of the veins. This process does not begin in the capillaries, but in the next higher group of vessels, begins at the periphery and extends proximally.

He states that "we are warranted in thoroughly supporting the proposition that thrombo-angiitis-obliterans is an infectious disease in which a specific type of organism is at work and although it has not been possible to demonstrate either bacteriologically or morphologically the presence of the offending agent, the pathological findings clearly indicate whither future studies should be directed in order that the causative factor may be discovered."

Concerning the microbic theory of thrombo-angiitis-obliterans Stetton states, "I cannot conceive of an infectious disease limited to one sex and practically to one race. I have never seen a female, and except for one Russian Christian, all the rest have been Russian, Polish or Galician Jews. I am convinced that the causative factors of this disease are of a nature similar to those of hemophilia, i. e., that some abnormality of the blood or instability of the vascular system has developed in certain racial groups, that this is transmitted to the males and becomes evident between the ages of 20 and 35."

In 1862 Raynaud described the disease which bears his name. The disease presents varieties or stages which may follow in order or may be confined to but one or two of the forms. The nose, ears and cheeks may be attacked in addition to the fingers and toes which are the parts most frequently affected. The blanched, cold and numb finger following exposure to cold, the so-called "dead finger," is its simplest and most common manifestation.

As we are not convinced that all of the above mentioned conditions are in reality distinct clinical entities with differing pathology and etiology and as time does not permit a detailed discussion of each, no attempt has been made to depict their differential symptoms nor to describe the changes characteristic of each.

There is one condition, however, which may be fairly stated as common to all and that is either a constantly or intermittently diminished blood supply to the part, be the cause what it may. Due to this temporary or permanent local anaemia, pain, numbness, temperature changes and tissue necrosis results.

Until within a few years amputation of the part has been practically the only treatment for those cases progressing to the point of gangrene, and we have all, I am sure, experienced that feeling of hopelessness and helplessness in being compelled to amputate an extremity, knowing full well that further mutilations would have to follow.

Horsley and others have attempted to increase the blood supply to the diseased parts by arteriovenous anastomosis working on the theory that the strong arterial current if deflected into the veins would break down the valves of the latter and that the local anaemia would be thus relieved. It has been demonstrated, however, that the arterial circulation passes but a short distance down the veins and quickly finds it way back to the heart by collateral venous channels. The result then of this anastomosis has been practically the same as has been accomplished by ligation of the femoral vein which causes a retardation of the return circulation, theoretically substituting a hyperaemia for an anaemia.

A few satisfactory results have been reported following each of the above methods of treatment, but it should be remembered that both of these methods are not without their dangers.

Willy Meyer has carefully tried out artificial hyperaemia by Bier's method and by superheated air—baking—but found that they were of but little benefit. So it would seem that operative and non-operative methods for increasing the blood-supply have on the whole failed.

Mayesima, of Kyoto, Japan, believes that in spontaneous gangrene of the extremities the viscosity of the blood is more or less increased and that saline infusions decrease this viscosity—thick blood is made thin. In 1913, Koga, also of Kyoto, published the results of thirteen cases of thrombo-angiitis-obliterans everyone of whom were benefited by methodical hypodermoclysis of saline or Ringer's solution.

Meyer and McArthur have both used the hypodermoclysis of saline, Lock's or Ringer's solution with satisfactory results and McArthur states that he gets equally good results with less discomfort and annoyance to the patient by introducing the solution into the duodenum with a Rehfuss tube, 4 to 6 litres daily, which, if properly administered, is tolerated without discomfort.

The method is most simple and can be carried out by the patients themselves. After a period of three or four hours of fasting an Ewald meal of tea and toast is given to stimulate gastric peristalsis, the bulbous end of an Ewald or Rehfuss duodenal tube is then swallowed and the tube allowed to pass on until the proper mark is reached, indicating that the bulb is in the duodenum. The Locke's solution is slowly introduced from a container, too rapid a flow producing intestinal cramps, until about 3000 c.c. have been introduced.

A word here about Locke's solution. In seeking for the formula it was found slightly different in each reference and the formula given below is practically an average, for no two were alike.

LOCKE'S SOLUTION

Sodium chloride	9.0 grams
Calcium chloride	0.2 grams
Potassium chloride	0.15 grams
Sodium bicarbonate	0.3 grams
Glucose	1.0 grams
Distilled water	1000 c.c.

I regret that opportunity has been afforded to try the Koga treatment on but two cases which are as follows:

W. B., 58 years old, native of Germany, was first seen on July 26th, 1917. His history is of no interest except as follows: In December, 1916, that is seven months ago, he began to suffer with pain in the sole of the right foot (over the metacarpo-phlangeal joints) which he attributed to the use of the foot on an automobile pedal. For two monts the fourth and fifth toes and the adjoining portion of the foot have been cyanotic. The cyanosis does not remain constant, but shifts. For ten days the pain in the toes has been so severe that he has been unable to sleep, even with the aid of fairly large doses of morphine. He is a rather spare man, but of fairly healthy appearance. His blood pressure is 135-185.

The fourth and fifth toes and the neighboring skin, dorsum and plantar, is cyanotic. There is superficial gangrene of the distal portion of both toes and a sero-sanguineous discharge from beneath the nail of the little toe. Pulsations in the dorsalis pedis and posterior tibial vessels can be distinctly felt.

The toes were kept clean and dusted with aristol. Delay was experienced in obtaining a Rehfuss tube and while waiting 900 c.c. of saline were given into a vein on July 27th, 500 c.c. on the 30th and 1100 c.c. on August 2d. The tube having arrived 2500 c.c. were given into the duodenum on August 4th and 3000 c.c. on August 6th. He then asked to be discharged to continue the treatment at home.

When first admitted, half a grain of morphine would result in but a fair night's rest, at the expiration of forty-eight hours morphine was discontinued and there was no further request for it. Upon leaving the hospital, after a stay of eleven days, both toes were practically healed, the skin was pink, the circulation was good and there was no pain. Later I received a letter from him stating that the toes were in perfect condition and free from pain, but that he suffered at times from pain in the ball of his foot when he used it too much. Very recently his physician reported that he had had a slight apoplexy, as evidenced by a slight deviation of his tongue and slight aphasia. He had been consistently following the treatment and it may be a fair question as to whether his circulation was overloaded. Due to his very evident circulation through the dorsalis pedis and posterior tibial arteries, this can be looked upon as a favorable case, but something relieved his pain and something healed up his superficial gangrene.

In the second case the results were not so striking, but there was a most evident improvement, particularly in the pain.

J. W., a strong, healthy, native-born farmer 41 years old gave the following history: About ten years ago he began to suffer with pain in the ball of the left foot accompanied by an edmatous swelling of the little toe. He was treated for "red neuralgia" without relief, arch supports were then fitted and these failing to stop his pain, he was treated for arthritis and inflammtory rheumatism. Finally, three years ago, it was decided that he was suffering with ingrowing nails, and the nails of both great toes were removed. The wound on the left great toe has never healed, and pain and tenderness have been constant. The pain in the ball of the foot is worse at night and is not so troublesome while working. The right foot is generally cyanosed. A portion of the nail of the left great toe remains, from around the edges of which a purulent discharge escapes. The distal portion of the matrix and tip of the toe are sloughing, and the bone is exposed and necrotic. The entire foot is hyperaemic, but only slightly swollen, and there is no pulsation in either the dorsalis pedis or posterior tibial vessels. The blood pressure is 70-105. His greatest complaint is that of pain in the foot.

This patient was immediately placed on the duodenal installation of 2000 c.c. of Locke's solution daily. Over 2000 c.c. caused distress and after several attempts to increase the amount 2000 was set as his maximum. Ordinary surgical care was given the toe and after a period of two weeks the remaining portion of the nail was avulsed and necrotic bone removed. Because of the low blood pressure digitalis was given. Fresh granulations sprang up slowly and when he left the hospital the wound bid fair to heal. In a letter received from him shortly after his discharge he stated that he had at least been relieved of his pain and I can add that I believe that his toe will heal.*

I do not know whether either of these cases were thrombo-angiitis-obliterans or not; the first case certainly resembled it and the second did not. I do know that they both suffered considerable pain, not alone in the affected toes, but in the foot, that in one case there was superficial gangrene and in other an indolent sloughing wound, and that both cases had received careful surgical care before coming to the hospital. Both were practically relieved of their pain, the gangrenous case healed and the other was healing kindly, though slowly, when last seen.

No reference has been made to an endarteritis secondary to syphilis or diabetes; in one, specific treatment and in the other dietetic treatment would of course suggest themselves, but we can see no reason why the Koga treatment should not be used rather than to immediately resort to radical procedures.

It seems not unreasonable, then, with the large experiences of McArthur, Koga and Meyer before us, to submit these cases of intracable pain and gangrene of the extremities to the very simple and harmless treatment above alluded to before resorting to amputation. The claim is not made that it is curative, though it may be in some cases, but in a certain proportion of cases it will apparently put off the evil day when these patients will have to submit to the loss of one or more of their extremities; surely any treatment which will accomplish such results is worthy of a trial.

* Since the above was written this patient has had his toe amputated but none of the details are known to the writer.

(For discussion see p. 483)

NON-TUBERCULOUS HEMATOGENOUS INFECTION OF THE KIDNEY.

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Brooklyn-New York.

IT is only within the past few years that a somewhat definite concept of the etiology, pathology and symptom complex of the non-tuberculous renal infections has been evolved and while some points are obscure, there is enough definite knowledge with which to make a clinical working theory.

> **Etiology**: "Staphylococci, streptococci and colon bacillus alone or associated are the cause of ninety-five per cent of the cases. Sometimes the definite focus of infection is seemingly demonstrable, as an infected tooth, tonsil or abscess; but bacteria are constantly entering the lymphatics from the intestine and other sources in healthy individuals. The bacteria may be destroyed at the point of entry or at the lymphatic glands, or they may pass through the lymphathic system into the blood stream, in which they circulate."—*J. W. Thompson Walker.*

Healthy kidneys excrete large quantities of bacteria with no damage to the renal parenchyma, or if there is irritation the reparative powers of the renal parenchyma prevent any permanent damage unless the irritation is of long duration. However, if there occurs a sudden release of a large quantity of bacteria with their toxins, or if the kidneys are at the same time elminating other toxic, irritating substances, such as certain drugs or byproducts of incomplete digestion, crystals of uric acid or calcium oxylate, then the parenchyma may be damaged sufficiently for the bacteria to secure lodgment. Less commonly this condition may be the result of an embolus. In my opinion the most frequent cause of these infections is the lowered resistance of the renal tissue which is due to some passive congestion in the kidney, resulting from a mechanical obstruction to the proper outflow of the urine as secreted. This obstruction is more commonly due to deformity of the kidney or ureter; stricture of the ureter or a contracted ureteral orifice; pressure on the ureter by blood vessels or some mass along the course of the ureter, frequently in the colon or uterus. Some displacements of the kidney and mechanical obstruction to the flow of urine from the bladder or urethra are also obvious causes of this stasis which is one most important factor in the production of a favorable soil for the fixation and growth of the bacteria.

Traumatism and prolonged exposure are always contributing causes but these factors are seldom elicited in the histories of the sheltered individuals of civilized communities.

Patholology: Gross. The picture is that of a diffuse inflammation. The kidney is enlarged from congestion, the capsule strips easily revealing reddish yellow areas, the which later on become whitish according to the amount of connective tissue repair that has taken place. The entire organ may be involved but there is no destruction of tissue except at the site of the abscess.

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* See Article by Cabot and Crabtree, Surgery, Gynecology and Obstetrics, Nov., 1916, for the best discussion of this subject in the American literature.

Microscopic: In many cases the minute abscesses show in their centres convoluted tubules filled with epithelia and leucocytes and a surrounding polynuclear infiltration of the interstitial tissue. The blood vessels throughout the cortex are engorged. In the region of the distal convoluted tubules and the bases of the pyramids there is an extensive suppurative process. The masses of cells found in the convoluted tubules show often large numbers of bacillia and cocci.

Symptom Complex: The clinical picture is that of a chronic condition with acute exacerbations of varying degrees.

The first attack to which the patient's attention is arrested may be the beginning of the infection or it may be an exacerbation of a condition which has been present for a long time.

An acute attack begins with a period of dull, aching pain in one or both renal regions, sometimes colic, frequently chill with a rise of temperature to 103 F. Urinary frequency and slight terminal pain on micturition or a mild tenesmus are present. The urine generally shows some pus, seldom any blood, no casts but always bacteria, if careful technique is used. The picture is suggestive of calculus.

During the period between the acute attacks malaise, anorexia, a dull ache in one or both renal regions with or without mild urinary symptoms is the usual history.

The urine may appear normal, unless careful bacteriological examination is made of specimens secured from catheterized specimens.

Cabot and Crabtree have called attention to their conclusions which they support with much interesting evidence, that the leisons caused by the pyogenic organism will show organisms in the early stage only (or during exacerbations) "since, however, these leisons are shut off comparatively, from the lower portions of the kidney and as they do not involve the pelvic mucous membrane, pus in any considerable amount, will be found rarely if at all. But the leisons of the non-pyogenic group are produced chiefly in the renal pelvis, consequently there is an early production of pus which appears with the bacteria in the urine." The kidney function as measured by the phthalein excretion is near normal in the suppurative infection since the cortex is the main site of the invasion, while the colon bacillus group invade the convoluted tubules mainly at first with an expected diminution in function. However mixed infection is common.

This briefly sketched clinical picture is not often clear cut and after the acute attack, when the radiograph shows the absence of stone, the urologist is asked for further information.

His examination consists in a study of the urethra, bladder and ureteral and pelvic conditions.

The cystoscopic picture generally shows the bladder normal, or at most a slight trigonitis. The ureteral orifices appear normal. patency of the ureter is established by catheter and pictures of the renal pelvis are secured through a pyelogram. Then diagnosis can be made only by a careful study of the urines secured through ureteral catheters.

The treatment can be summed up briefly: Remove any discoverable focus of infection; correct any condition which may produce stasis in the kidney: (here it may be stated that lavage of the renal pelvis for pyelo-nephritis benefits probably by dilatation of the ureter which is often narrowed at the meatus or elsewhere); secure proper diet and hygiene with plenty of pure water to avoid the renal irritation of excessive waste products and give for short periods large doses of hexamethylamain, especially in the presence of colon b. infections. The administration of appropriate vaccines is sometimes of value.

The four histories appended are illustrative.

I. *History.* (Dr. Duffield) Mrs. G. age 28 m.

F. H.: excellent. P. P. History: nothing of interest except an instrumental delivery five years ago.

For past four years a fecal fistula which has been well for past six months.

In October, 1916, following attack of grippe and bad cold, taken suddenly with symptoms severe acute cystitis; severe dull pains in each renal region. Urine contained pus and a little blood, there was frequency and pain. After subsidence of acute symptoms, radiographs for calculus were negative.

Gradual recovery and pains in renal region disappeared with the wearing of a surgical corset. First seen by Dr. D. in March, 1917. Bimanual and other examinations negative. At this time there was present mild cystitis symptoms, no renal tenderness.

Cystoscopy Bladder shows few patches of chronic inflammation in trigone. Ureteral orifices normal. Catheters enter easily to pelves. Functional test on each kidney normal. Urea 3 grs. each side. It was a pale amber. No pus and no bacteria. Instillation argyrol gave relief. After two months treatment seemingly well, when began to complain of right renal tenderness, malaise, acute cystitis, chill and temperature to 102. Urine contained staph and coli b. After eight weeks' rest, attention to diet, bowels and urinary antiseptics seeming cure.

Remarks. Renal infection from some focus, possibly fistula in ano. At time previous examination of urines direct from kidney there was no infection or else the small abscesses were quiescent but later fresh infection through blood stream or some local irritation awakened old foci in kidney to excretion of bacteria.

II. Miss E. B. Dr. Erdmann. First seen at age 14, six years ago.

At that time a history of tonsilitis three months previously, so sick that school was given up. One month later while on trip to Boston a severe renal colic on right side accompanied by chills and temperature up to 103. These attacks have occurred frequently since then and were followed in a few days by urinary symptoms, urgency and a little pain.

Examination at that time: The clinical picture suggested right renal tb. The bladder was negative. The urine contained staph and colon b. The stained specimen contained organism that looked like tb. though the pathologist refused a definite diagnosis as such without g. pig innoculation. As the patient seems very sick, the left kidney urine was normal I thought that there was present a renal tuberculosis. At operation the kidney was enlarged from congestion, a few area of congestion, reddish under capsule. On section the parenchyma appeared normal. The kidney was sutured and replaced. Convalescence was normal and for a time there was improvement. But ever since this kidney and in a few months the left also has been the site of chronic infection with b. coli and staph as shown by many examinations of the urine. The patient while active and strong, has a pasty look, suffers with attacks of colic or renal tenderness, headaches and indigestion and all the signs of infection of the kidneys. No form of treatment has been of benefit, though many places of possible foci have been eradicated. Teeth, tonsils, nares, etc.

III. *History*. Mrs. E. S., age 50 m. Dr. Lloyd Fisher.

F. H. Personal previous history and habits all excellent.

Her complaint: Backache, right lumbar pain, dysuria and frequency of micturition. First seen in October, 1916.

In August, 1916, took "cold" and developed grippe; after a week, frequency every half hour; five days later slight pain, most marked when bladder was full and relieved on emptying it. For two weeks from onset temperature 99 to 101 F. During third week temperature up to 104. No definite chill but chilly feelings. There has been no renal colic. The dull ache in the back began the 14th day from the onset of her grippe and nothing alleviates it. During this early period cystoscopy showed no leison in the bladder, as reported, but lavage with sil. nit. solution relieved temporporarily the vesical discomfort. Temporary improvement for a week, then return with chill and 104 temperature as per chart.

Examination in Hospital: Right kidney not enlarged but painful to deep pressure. The urine clear amber, acid, no casts nor albumin, a few red and white blood cells. Large quantities of bacteria B. coli and staph. (culture). Blood: 4½; red 8700 white of these 82% polynaclear.

Cystoscopy: Bladder membrance normal. Ureteral orifices normal. Catherters entered to renal pelves on either side without difficulty.

Urine secreted freely	Right	Left
Indigo-carmine secreted	25 mins.	12 mins.
Urea	8 grains	14 grains
Bacteria	large numbers	few

Radiograms negative for stone or increased size.

Pyelograms with thorium showed normal renal pelves and ureters.

Treatment: Rest, diet, bowels, colonic irrigations, hex. and autog-vaccine.

After two weeks slightly improved. Vaccines continued at home by Dr. Fisher, gradual improvement in her general condition and she is now well.

Urine examination: colon B. and staph.

IV. A case of One Sided Suppurative Nephritis.

Male, age 53, Italian.

General health excellent until five months before consultation which was in August, 1914. In March, 1914, he reports a bad cold followed by cystitis and retention. Catheterization necessary for nine days. Since this time symptoms mild cystitis and occasional hematuria. Chief complaint was a gradual and progressive weakness and a dull pain in left renal region. Examination showed a dry tongue tempt. 101, a large mass in left renal region.

Urine contained slight amount pus; no blood, casts, nor albumin. Prostate negative and no residual urine.

Cystoscopy. Normal bladder and u. o. Urine from right side normal; from left side, staph. strept. and colon b. with greatly diminished functional output. *Operation.* Nephrectomy. Kidney four times normal size, on section a slight oozing of pus and macroscopic area of pus foci. The pathologist, Dr. Murray, reported a chronic suppurative nephritis. The pus foci contained staph and colon b. Convalescence uneventful. Patient seen January, 1917, is in good health. Remaining kidney functionating normally; urine normal.

MEDICAL NEEDS AND CONDITIONS OF THE NATIONAL ARMY.

Major Charles A. E. Codman.

United States Army.

Mr. Chairman, Honored Guests, Ladies and Gentlemen and Fellow Members of the Profession:

We are here tonight in response to orders from the Surgeon-General. You have heard how a few of the Brooklyn men have been taken to Washington and made leaders of men. We are here tonight to extend an invitation to the remaining men to come and join the Medical Officers' Reserve Corps.

We have been touring the country for several months. When we first started out we found that the people of this country did not realize that were were in the war. This fact impressed itself upon us in every place that we visited. However, in the last month or so a great change has come over the American people and from every city and from every town and from every hillside boys have gone forth to go into the National Army. When these boys left home there was not that cheering, that great enthusiasm, but there was a solemnity which pervaded the entire community, and every man, woman and child seemed to realize that this country was facing a crisis.

Now that these boys have been selected you have frequently heard the boards referred to as Exmption Boards. They are really not exemption boards, but selection boards. Only the best boys in the United States can belong to this army. They are not taking everybody. They want the best and the best boys that we have have gone forth and are now in these cantonments. These boys must be cared for, every one of them, and the greatest honor that the medical profession has ever had bestowed upon it has been given to it by the people of the United States.

This great army was created by the President, but it never could have been selected unless the physicians of America had come forward. They may try to create an army, but our profession selects it (applause). The medical profession has never stood in such a position as it occupies at this moment.

The Reserve Corps when we first started out, asked for 10,000

An address before the Medical Society of the County of Kings, Oct. 16, 1917.

physicians. After we were gone a little while the number was increased to 15,000 and then to 21,000, and now we are asking for 30,000 physicians. This is the first call—only the first. We have heard from time to time that we are preparing for an army of 650,000 men. The first draft has been called, the second has been ordered, and if the truth be known, we are not going to have an army of 650,000, but we are going to have an army of twice that number (applause). We are getting ready for a three years' war and for an army of 5,000,000 men.

In this country there are about 142,000 physicians. When you take out the women and the old men and the incapacitated, you will find that there are about 90,000 left.

The Regular Army has been recruited to full strength. That has taken physicians. The National Guard has been recruited to full strength, and that has taken physicians. The Navy has been brought up to standard, and that has taken physicians, and if you count them up there are approximately 30,000, or, in other words, one man in every 3 in this room must respond to the first call to the colors.

At the present time the profession must be congratulated on the fact that in the few months in which we have been engaged in this horrible conflict the number in the Reserve Corps has greatly increased. When the war commenced the regular staff of physicians in the United States Army service consisted of 600 men. There were in the Army 420 physicians, and in the few months in which we have been engaged in this struggle we have commissioned 18,000 physicians. American doctors to the number of 18,000 have immediately come forward and offered their services and been commissioned. We can even commission more, as 30,000 have offered, but not all have been accepted, many for physical reasons. Such is the spirit of the American doctor. In many states men have come forward and said, "I would like to join the Medical Reserve Corps." The man would be examined and found physically unfit because he had a hernia, and after being rejected he would be operated and go in the Army anyway. I've examined many a man who has been operated and is now in the Army under commission. Those are the kind of men we want.

Now, I want to give you a word or two in reference to the character of the boys who have gone into the officers' training camps. Early in the spring a call was issued for young men to come out and offer themselves for examination to be sent to the officers' training camps. Fortunately, I happened at that time to be one of the examiners. These boys came from all the colleges: they came from Harvard, from Yale, from the University of Pennsylvania, from Princeton, from Franklin, from Marshall, from Lafayette and so on—the best boys you ever laid your eyes on, the cream of American manhood. They were examined by the hundreds. They came so fast that it was necessary to open an armory and a corps of physicians examined the boys from head to foot. Every boy was stripped. You would go into a room and probably find 50 or 60 naked boys, standing there with a corps of 30 doctors. These boys were an honor to American manhood. They represented a fine type of young American college men. Out of the hundreds that were examined we never found an infected boy, not one! (Applause). That is the calibre of the young American who is to take care of the boys in the National Army, and those are being examined with just the same methods and with the same severity.

Now, possibly you would like to know a little of what is expected of a man when he comes into the Medical Reserve Corps. The Government realizes that when a physician comes into the Corps he is making a sacrifice. It is a sacrifice from the moment you place a uniform upon your back. Now, the Government does not ask the man to place a uniform upon his back for nothing. Therefore, physicians do not enlist: physicians apply for commissions, Lieutenants', Captains', Majors'. The pay of a Lieutenant is $2,000 a year. Of course, that isn't much, but it's something. The officer can live in the field for approximately $50 a month. That is a good outside figure. I have talked with many men in the Army and they have verified these facts. You are not going on a picnic. This is a very serious undertaking. When a man comes into the Medical Reserve Corps we do not want him unless he has talked this matter over with his wife, his mother or his children. The people who suffer are the women and children. A man may be able to live on approximately $50 a month. That is the very outside figure. Therefore, he is able to return at least $1,400 to his family. This is the pay of a Lieutenant. The man's equipment will cost him about $150—not more than that. Some of the men in other branches of the service may pay more, but in the Medical Officers' Reserve Corps it is approximately $150. That is an outside figure. That includes his uniforms and everything.

The Government is making an effort to place every man properly. That is the only reason why they had the selective conscription. That is the only reason why the men are all being sent to training camps, so the right man may be put in the right place at the right time.

Now, the physicians, as you have heard, have all been classified. Every physician in the State of New York is known—his age, his dependents, his location. They know all about him. The Medical Reserve Corps is open to all men between the ages of 21 and 55 years. In certain instances if a man possesses special ability, the Government may waive the age limit and take him in, but that is exceptional. Only men between 21 and 55 are eligible.

Now, as to the work which has been accomplished, as to what others think of what has been done by the Surgeon-General: Mr. Julius Rosenwald, of the Sears, Roebuck & Co., one of the foremost business men of this country, was invited to one of the meetings of the Medical Section of the Council of National Defense and when he heard what had been done and what had been accomplished, he was asked to speak and he said that he was simply astounded. He could not say anything. The fact that at this time 18,000 men had responded was something which astounded the big business man of the United States.

After a man has gone into the Medical Reserve Corps the first thing to do is to wait and then he will receive a communication from the Surgeon-General telling him that he must be prepared to leave on a certain date. Now, this does not mean that this man should immediately bid his family good-bye and leave. He must wait until he receives an order from the Adjutant-General. That order means to move, but the man must prepare himself beforehand.

At the present time the men who come into the Medical Reserve Corps must continue the practice of medicine until they receive orders to leave, and not until then. They must not stop practicing.

I was saying that the man is placed in his proper position. At first the man who is sent to a training camp may be misplaced, but later on he will be placed exactly where he belongs. The eye men will be placed together, the skin men, the nose-and-throat men and the ear men. All the work will be classified, but this takes time. There is a difference between civil practice and military practice, and for this reason the Government is sending physicians to training camps. They are willing to invest a certain amount of money in every man, and when they go there they are taught the difference between civil practice and military practice.

This is a wonderful opportunity. This is one of the greatest opportunities ever come to the medical man. In fact, this land in which we live is really the land of opportunity: there is no doubt of it. Only a short time ago I was invited to a dinner that was given to a man who had just been made a judge and after a number of eulogistic speeches had been made he was called upon to respond, and he stood up and said, "Truly, America is the land of opportunity. I began life as a boy picking coal in a breaker at the age of eight and now I am 39 and am wearing the ermine." America, the land of opportunity!

As an echo of this story, the Major related the story of a visit which he and Major Jump, also on the program, had made with two others to a coal-mining region and had been invited by the superintendent of a coal company to visit a coal-breaker, and after explaining the different stages which are gone through in coal-breakers for the purpose of assorting the coal, the Major stated that what struck him most impressively of all about the trip to the breaker was the fact that at the very bottom of the breaker were a number of little boys, pale, thin and cadaverous-looking, who were engaged in picking slate. He said he couldn't help but hesitate a moment, he was so disagreeably affected by the sight before him and felt so sorry for these poor boys, and patted two or three of them on the head and spoke to them. Continuing, he said: This man stepped out just then and we went outside and I said to him, "I thought of my own boy for a moment when I beheld that sight, those poor little fellows picking slate in this great coal-breaker." He looked at me a moment and said, "Major, I was a breaker-boy myself," and he was a man making, I should judge, $10,000.00 a year. America, the land of opportunity! Here is one of the greatest opportunities in the world for the American physician. Let us help to keep this opportunity here. We are in this war not of our own seeking, but because the atrocities of enemy prevented us from remaining neutral (applause). We are in it and we want to stop it. The great specialist and the young doctor have turned their backs upon comfort and upon wealth and have gone to the battlefield on an errand of mercy. The doctor is not in this for glory. He is in it to save the lives of men! (Applause.) This is the spirit which pervades the whole community.

Last spring I was invited to go to one of the great telephone offices with a number of other men. They were about to open the transcontinental telephone line, and as we sat there they told us that alongside of the chair there was a receiver and for each man to take it and hold it and at a given signal the Old Liberty Bell in Independence Hall would be struck three times and that that was the signal for the man far out on the Pacific Coast. We sat there in silence and in a few moments we heard the magic sound of the bell—three strokes on that old, cracked bell, and in a moment, 3,000 miles away, a man took up a cornet and we heard the notes of the Star Spangled Banner coming all the way across the continent, uniting us, every one, showing us that it is just one great country and it is a great democracy and that at the present time it is our privilege to help to carry the sound of that bell and what it means, Democracy! all the way around the world and bring it up on the other side (applause).

This is not a war of conquest; it is not a war of aggression; it is not a war of our own seeking; and we medical men want to go into it to stop it. We are not in it for a career. We want to go into it and help put an end to it (applause).

Now that they are taking our boys and they have gone to these cantonments, it is our duty as medical men to care for them. Only a few years ago when the Spanish-American War was on our boys were taken and placed in camps. I remember Major Jump and I were sent out upon hospital trains and on one of them we were sent down in the Southland and there at Knoxville, Tenn., they had a camp of 20,000 men and they were five miles from water. We walked down one of the company's streets and there were about 115 men in it. When we walked down the company's street in September there were 42 men left. What was the reason? We walked down the company's street and at the end of it was the mess tent and alongside of it were the sinks and in the sinks there were flies by the wholesale, not thousands, but millions of them. You can picture the result—a veritable slaughter. We brought these men home by the trainloads. The convalescents had a fever of 102-103; those sick and delirous, 105-106. They were brought home on the flat of their backs.

The medical man of today is interested in preventive medicine and these camps of 20,000, 30,000, 40,000, 50,000, 60,000 and 80,000 men where they have taken our boys and where they are training them, shall be made health resorts and not pestilential areas and it is your duty as men to help us: come out and help us to do it. We are giving the very best of our men and the best is none too good for these boys.

When I was here at the meeting of the A. M. A. I read in the newspapers of the casualities in the war amongst medical men. One newspaper said the casualities amounted to 66,000 medical men killed. Col. Goodwin, of the English army, was sent here at that time with Marshall Joffre and Mr. Balfour and the others and I asked him as to the truth of this and he turned over his notes and said, "Let me give you the truth," and in his own handwriting I have here the casualities among medical officers on the Western front from the commencement of the war to June 25th, 1917; in other words, in three years of the war: Killed, 195; wounded, 707; total battle casualities, 902. Died of sickness, 62, or a total of 964 in three years of the war, so the casualty list is not what they say it is. It is not what it is commonly reported. Only one in every 15 in the army is killed and that is not as great as the toll taken by the industries of the great states. So it is just as safe a place in the Army, and practically safer than it is at home.

When we first went out and were touring the different states when we would go into a small town or city the people would nudge one another and say, "There is a man in uniform," and they would all look out of the corner of their eye to see the man in uniform, but the time has come when the man in uniform has ceased to be a curiosity and, brothers in medicine, *the time is coming when the medical man, the eligible medical man, who has not a uniform upon his back will be the object of curiosity.* The people of Brooklyn and of

New York, the lay people, have shown their spirit of patriotism by over-subscribing the first Liberty Loan. Now you are all called upon to subscribe to the second Liberty Loan and we are here tonight to ask the physicians of Brooklyn to come forward and help make this city an example for the entire United States. *Your country wants you, your country is calling you and your country needs you and needs you now, not when you think your country will need you, but your country needs you now!* Brooklyn men have always done their duty and I am sure that Brooklyn men will do it now! (Applause.)

MEDICAL NEEDS AND CONDITIONS OF THE NATIONAL ARMY.

Major Henry D. Jump.

Member of Committee on State Activities and Examinations of the Medical Section of the Council of Defense.

Mr. President, Ladies and Gentlemen:

It is a great deal of pleasure to me to come from a neighboring city into this city of Brooklyn which I have known for a long while and in which I once lived. I have a very pleasant recollection of my term of residence here.

It is particularly pleasant to us to see such a turn-out as this in a medical society. We do not often do it this way in Philadelphia.

I think, perhaps, I may be said to represent, as does Major Codman, the Surgeon-General, or rather the Council of Defense and through that the Surgeon-General. We want you to understand that the Medical Section of the Council of Defense stands between you medical men and the Government. Your problems are ours to solve for you, and instead of writing lengthy telegrams, sent, perforce, as night letters to the Surgeon-General and waiting for months for a report or a reply, we beg leave to suggest to you that you use the Medical Section of the Council of Defense and tell us your troubles. We have the ability and the time to go into these things and can very frequently get a reply more quickly than you could yourselves.

I want, with Major Codman, to add my word of praise to our profession and to say that to get as many men in the Corps as there are today means that there must have been offered to the Government over 25,000 physicians who six months ago were peacefully earning their living in civil practice and when the call came to come out and to go into the service and help the Government in this time of war those men did it—over 25,000. No other class of men, no other profession has any such record to look upon as we have, but that isn't all. Ours has been a profession of sacrifice and of service. We are to be called on for more and I am perfectly satisfied in my own mind that the physicians needed to equip the Army will be forthcoming in sufficient numbers so that we need never think of a draft of the medical men. But I do ask you to pay particular attention to the fact that we haven't all that we need and I ask your earnest attention to this thing that each man may take home to himself the problem as

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An address before the Medical Society of the County of Kings, Oct. 16, 1917.

it presents itself and solve it for himself. Do not delude yourselves into thinking that you are not needed. You are needed now and you are needed to go into the Reserve Corps for the purpose of the Reserve Corps, to be called upon in case of necessity, and the necessity is upon us and while you go into it today you may not be called for several weeks or several months, but you are going to be called upon ultimately when in the wisdom of the Surgeon-General's office your particular services are needed.

It is a great deal of a sacrifice for a physician to give up his lucrative practice at home and take a position, or rather a commission, in the Medical Reserve Corps as a First Lieutenant, a Captain or a Major, but it isn't a question of competence or of reward for services rendered, but that we are willing and must be willing to give all that we have to assist in this time of war. It is a period of sacrifice for you and your families and all of yours. Today is a period of sacrifice, as you all well know. We have to adjust ourselves to the conditions. We have got to prepare ourselves to do our particular part.

If every man under 55 in this country were in the Reserve Corps many of the problems of the Surgeon-General would be solved.

In France there is not a single physician today in civil practice. All are in the military service—some with one leg, some with one eye, some with one hand or debilitated in some other way, and they are detailed to take care of the civil population. The able-bodied are sent into the army to do the work which the strong man is called upon to do.

We would like to have every single able-bodied man in the country, nearly every one, in the Reserve Corps. Think about it and consider why we medical men are needed to examine the Army, to maintain the Army in its health and to repair the Army when it is wounded. And why are we at war? And why do we need this army? As has been said to you before, this is not a war of aggression. This is not a war of our seeking. We are not in the war of our own choice, but because we have been forced into it and our Army is being sent off to battle with our allies because our cause is just (applause) and if we were to consider this matter from the selfish standpoint, we must consider what would have been our fate had our allies been defeated. Our time would have come sooner or later, and I ask you to picture all the desolation and the devastation of the Valley of the Marne, the Valleys of the Champagne—I ask you to picture how that country is torn and destroyed by this ruthless enemy. Just picture what that thing would be here with a force landed upon our shores, perhaps with their German fleet freed after the war, and we would be facing in our country an enemy long since stripped of that thin veneer of civilization and Kultur of which they are so proud, until they have become the ruthless and cruel Hun of their ancestors, destroying and devastating whatever part of the country they touch, violating our women and destroying and murdering our children. Think of that, if you please, and try to arouse yourself if you are still apathetic and indifferent in this matter, to go forth and help fight this war which is being fought today with our allies on the other side rather than being fought by us alone in this country of ours. They have taken the men folks and treated them as slaves. They have driven the women to worse than their graves. They have taken the babies and cut off their hands. They have turned the brightest and most peaceful lands into barren wastes. I beg of you to consider your women and kids. I beg of you to consider the privilege which is yours to fight for your country. I beg of you to consider the privilege which is given to you to fight for Democracy. We have lived so long under the beneficent influence of Democracy that we have become complacent and we can not appreciate the opposite state of affairs, but while we have sworn to defend Democracy we must make the test or fight alone.

I call to your attention, if you please, the fact which must be taken to the faithful ones, that this war is the greatest epoch which has occurred since the birth of Christ and to stay at home complacent, satisfied, that it is not yours is not the proper spirit and if you think about it you will not be denied the privilege of taking part in this greatest event, and you must not be denied that privilege. If necessary, you must fight to get that privilege of taking part in this momentous occasion and epoch, and you who feel not the call and have not yet seen the light, must sooner or later come to the time when you will be prepared to offer a valid excuse as to why you have not taken part, and that excuse must be given to your own boys when they have grown up and ask, "Father, what part did you take in the great war?" Think of it. I ask you to take that thought home with you. It is not for me nor for any one else to tell you your duty. You have your own problems. You know your own domestic affairs. You know your own financial resources. You know your own importance, only please don't exaggerate your importance in your hospital or locality, when you take refuge behind the skirts of your wives and your other home folk. This is serious business. We want you to consider all of these things. I ask you young men sitting in this room, young men under 40, sound of body, with responsibilities and obligations at home, to sit down and face this thing with your own conscience and say to yourselves. "In which direction does my duty lie?" It is going to be harder for some of you to stay home than do that thing which is absolutely and positively your duty. He who has not considered this matter and has not a real excuse to offer is bound to suffer. I ask you as the last thing with you tonight, to take this matter up seriously with yourselves, present it in all of its phases and decide what is the best thing for you to do. (Applause.)

EDITORIAL

THE MOUTH AS A PORTAL OF ENTRY

NOT everything that enters by the mouth is desirable for the belly. This free paraphrase of an ancient axiom must not be taken as a flippant reference to such things as chewing tobacco, submarine sundaes, slate pencils, dill pickles and the host of assorted abominations that the human animal so recklessly introduces into himself per orem. This is not a disquisition on foolish foods nor a temperance sermon nor a diatribe against the tobacco habit; it is the sober review of an article by O. T. Osborne, of New Haven, Conn. (Jr. A. M. A. Oct. 20, 1917) on Mouth Infections. Prof. Osborne takes the ground that the bacterial invasion of the teeth and tonsils is the greatest present day menace to health, a stand that is by no means unreasonable when one considers the accumulated evidence of the past three or four years of the importance of mouth infections as the portal of entry for the various members of the coccus family that play such havoc in the human body. One may accept almost without reservation the statement that the pneumococcus, the streptococcus viridans, the streptococcus hemolysans and their more common cousins of the pyogenes group, including the streptococcus pyogenes septicus find their way into the system through the teeth or the tonsils. It is not necessary that the so-called apical abscess should be demonstrated in order to fix the responsibility for infection upon a tooth. Absorption doubtless occurs from the spaces round teeth loosened by pyorrhoea and in many instances can be definitely traced to bridge work as well as to teeth that have been merely filled. The list of diseases traceable to such infections is a formidable one. While one may catalogue such conditions to ulcerative endocarditis, fatal bacteremias, nephritis, cholangitis, polyarthritis, thyroid disease, arteriosclerosis and a host of subvariants, it is far better to get away from this survival of the Brunonian system and to class all these infectious conditions as focal manifestations of a streptococcosis.

One notes with interest the varying attitude of physicians and dentists toward the treatment of the various problems in which they are called to cooperate. There is an extreme radical class of dentists and of physicians who urge that every suspected tooth be promptly sacrificed; there is an ultra conservative class who still refuse to sacrifice an infected tooth and who rather sneer at the enthusiasm of the radicals, and between the two there is a considerable body of moderates who regretfully sacrifice some teeth by way of compromise so they be permitted to retain others for treatment. The same broad divergence separates the tonsilectomists from the conservatists. Doubtless many harmless tonsils have been rooted out. Doubtless also many should be rooted out that still shrink coyly from the searching professional eye. We recall a beautiful quatrain that was once leveled at a leader among the radical tonsilectomists:

"The shrinking tonsil from its lair,
The slimy adenoid,
He snatches out and leaves instead
A red hot aching void."

Some day a poet will arise to glorify the dentist who has the courage to remove a diseased tooth rather than to treat it for profit. So much may be said in favor of rational conservatism in the effort to retain teeth that the advocate of wholesale extraction for the relief of mouth infections is likely to be put down as a heedless extremist, but it is better to sacrifice one tooth that has become infected with the streptococcus viridans than to endeavor to check the growth of that destructive parasite once it has begun to grow in the blood stream. One of the saddest of such cases is that of a young wife of a dentist of high repute who died after three months' struggle against a viridans bacteremia. The viridans was demonstrated in a pocket at the root of a molar tooth that her husband had most carefully filled, but too late to save her, although autogenous vaccines were used early and persistently.

The subject is too broad a one to be treated editorially in all its wide-reaching branches, but the thought may be driven home that after all that has been said and written, there is still but an imperfect conception on the part of doctor, dentist and patient alike of the tremendous importance of a thorough recognition of the part that teeth and tonsils play in the causation of disease and of how much can be accomplished by intelligent prophylaxis. H. G. W.

AN OLD PROBLEM REVIVED.

ACTING on behalf of the Department of Public Charities, First Deputy Commissioner H. C. Wright took up before the Society of Medical Jurisprudence recently the relation of the municipality to medical education. He calls attention to the fact that among the hospitals in the city, eighteen with a capacity of 16,000 beds are administered by the municipality and he called particular attention to the fact that not more than one-fifth of the cases treated were utilized for clinical study or for post graduate instruction. This suggestion of Commissioner Wright's opens up a question which has been often discussed, and often with much bitterness, as to whether all physicians should not be privileged to enjoy the opportunities offered by city hospitals. It is interesting to notice the promptness with which a number of physicians who discussed the Commissioner's suggestion urged that private physicians be privileged to treat their patients in city hospitals. Another outgrowth of the question was a suggestion that staffs of instructors be paid by the city.

In the interests of advancing the standard of medical practice there can be no question of the vast gain for the general public of opening to all physicians such splendid opportunities for self-improvement as are offered by the general and special hospitals throughout the city, all of which would gladly cooperate to this end could a plan be formulated that would insure practical results. This question has two separate and distinct phases, however, which must not be confused in discussion. On the one side is the question of increased educational opportunities for all physicians. On the other side is the opportunity for financial gain accruing to physicians who have the privilege of treating their patients in hospitals. It is perfectly obvious that any plan which undertakes to combine these two opposing factors is bound to result disastrously. If one were to construct a plan by which all physicians irrespective of preliminary education, sectarian bent, institutional training, etc., should be privileged to visit hospitals freely for the sake of study and clinical instruction, it would be quickly apparent which ones were in earnest in the endeavor to improve their medical knowledge and which were merely interested in the financial side of the question. Indeed, if one were to study the faces at the public clinics, which a very few of our hospitals now conduct more or less spasmodically, he would be interested to see the same men appearing whenever the opportunity is offered and surprisingly few at that. The irregularities of medical practice, the broken hours, the physical and mental weariness that are their logical result tend to make the ordinary practitioner apathetic when it comes to voluntary attendance upon clinics, unless there be advertised something that is startling by reason of its newness or rarity. The writer well recalls the unusual crowd that turned out to witness an operation by the late G. R. Fowler that was advertised under the alluring title, "Onychogryphosectomy." He also has had occasion to deplore the lack of interest shown by the profession at large, at least in Brooklyn, to clinics at some of the leading hospitals; and arguing from such experience he is persuaded that mere opportunity for personal improvement is not enough to arouse the average practitioner to better his diagnostic and therapeutic training. On the other hand, offer to those same men the opportunity to utilize the beds and operating room of a well equipped hospital so that they may get surgical fees from their private patients and one would find a startlingly different response. It is natural in looking for the latter privilege to overlook the years of patient training as an understudy and the large amount of unremunerative time given up to pure drudgery that must be endured before a man is ripe to be trusted with the responsibility of caring for a hospital service and *all that that implies.* Every private soldier would like to be a general and most doubtless feel that they could conduct a campaign just as well as the man who commands them, but the responsibilities, the training, the experience and the special aptitude are all overlooked when the average private looks enviously upon his commanding officer. The same holds good for the man at the head of the hospital service. Certainly his position is enviable, but as surely he has been trained to fill it and without this training the hospital would rapidly deteriorate and its principal function, that of affording the best care for the confiding patient, would quickly disappear.

These roughly sketched considerations of a large problem may be taken to show the unwisdom of lowering the hospital efficiency by multiplying the sources of error incident to a large untrained staff and the futility of offering expensive opportunities for self improvement to men who do not seem to take advantage of those they already have. The practical course, the one promising the largest results to the greatest number would be to require so many hours of attendance at public clinics each year on the part of practising physicians. The advantage would be twofold: the men now in charge of the hospital work would be spurred on to do better work and make themselves fit to be instructors and the other fellows would be kept bright and polished; but the community is hardly ripe for quite such drastic action. H. G. W.

Medical Society of the County of Kings

MONTHLY BULLETIN TO MEMBERS

DECEMBER, 1917

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Stated Meeting, Nov. 20, 1917.

The President, Dr. Albert M. Judd, in the chair. There were about 300 present. The meeting was called to order at 8:45 p. m., and the minutes of the last meeting were read and approved.

Report of Council.

The Council reported favorably upon the following applications for membership:

S. Potter Bartley, 65 So. Portland Ave.; L. I. C. H., 1914; proposed by E. H. Bartley; seconded by Membership Committee; May, '17.

Wm. J. Clemens, 447 77th St.; Fordham, 1913; proposed by J. G. Williams; seconded by C. G. O'Connor; Mar., '17.

Walter A. Coakley, 500 Clinton St.; Fordham, 1916; proposed by A. M. Judd; seconded by E. H. Fiske; Mar., '17.

Alfred B. Cooke, 913 Union St.; Queens Univ., 1912; proposed by H. A. Fisher; seconded by Membership Committee; May, '17.

Francis W. Currin, 270 Halsey St.; Tufts Coll. M. Sch., 1913; proposed by E. G. Hynes; seconded by J. G. Williams; Nov., '17.

Homer V. Duggan, 955 St. Johns Place; L. I. C. H., 1893; proposed by T. L. Vosseler, seconded by C. H. Tagg; May, '17.

Arthur C. Graves, 2823 Clarendon Road; P. & S., N. Y., 1908; proposed by A. M. Judd; seconded by Membership Committee; May, '17.

Irving Gray, 1922 Bergen St.; Univ. & Bell., 1913; proposed by J. Merzbach; seconded by A. M. Judd; Oct., '17.

Robert Kingman, 67 Hanson Place; L. I. C. H., 1899; proposed by R. O. Brockway; seconded by A. M. Judd; May, '17.

Louis Koenig, 301 Hinsdale St.; L. I. C. H., 1907; proposed by A. M. Judd; seconded by J. G. Williams; Oct., '17.

Arthur Lauer, 178 Atkins Ave.; N. Y. Univ. M. Coll., 1911; proposed by W. B. Agan; seconded by Membership Committee; Nov., '17.

Margaret McCarthy, 340 Stuyvesant Ave.; N. Y. M. Coll. & Hosp. for Women; proposed by J. C. Hancock; seconded by Membership Committee; Mar., '17.

Joseph A. Manzella, 380-a Clinton St.; Univ. Penn., 1912; proposed by E. Bishop; seconded by W. S. Smith; May, '17.

Meyer A. Rabinowitz, 183 Vernon Ave.; Cornell, 1907; proposed by L. Louria; seconded by J. Fuhs; May, '17.

Melchoir F. R. Savarese, 222 Johnson St.; L. I. C. H., 1911; proposed by O. A. Gordon, Jr.; seconded by J. G. Williams; Oct., '17.

Fedor L. Senger, 9214 Glenwood Road; L. I. C. H., 1912; proposed by J. S. Read; seconded by Membership Committee, April, '17.

Election of Members.

The following duly proposed and accepted by the Council, were elected to active membership:

Frederick Gauch, 12 Hawthorne St.; L. I. C. H., 1911; proposed by A. Potter; seconded by A. M. Judd; April, '17.

David D. Jennings, 406 Ovington Ave.; N. Y. Univ., 1886; proposed by J. C. Hancock; seconded by Membership Committee; Mar., '17.

Chas. J. Lundbeck, 107 Bergen St.; Eclectic, N. Y., 1883; proposed by A. M. Judd; seconded by Membership Committee, April, '17.

Raffaele Muojo, 165 Washington Park; Univ.

Naples, 1896; proposed by R. W. Westbrook; seconded by S. J. McNamara; Mar., '17.

Wm. D. Scanlan, 196 Prospect Park West; L. I. C. H., 1907; proposed by S. J. McNamara; seconded by Membership Committee; Mar., '17.

Applications for Membership.

Applications for membership were received from the following:

Nathan H. Adler, 236 Lewis Ave.; Univ. & Bell., 1915; proposed by W. Pfeiffer; seconded by A. Bell; Nov., '17.

Harold L. Hall, 404 Beverly Rd.; Cornell, 1910; proposed by S. J. McNamara; seconded by F. B. Cross; Nov., '17.

Isaac P. Heymann, 142 Henry St.; Johns Hopkins, 1913; proposed by C. F. Pabst; seconded by N. T. Beers; Nov., '17.

Maurice B. Pearlstien, 309 Hewes St.; N. Y. Eclectic, 1899; proposed by R. H. Pomeroy; seconded by Membership Committee; Nov., '17.

Winfield A. Peterson, 454 43d St.; Univ. of Buffalo, 1906; proposed by T. B. Spence; seconded by R. M. Beach; Oct., '17.

William L. Stone, 444 74th St.; Balt. M. Coll., 1910; proposed by T. B. Spence; seconded by H. F. Graham; Oct., '17.

Edward M. Wellberry, 218 6th Ave.; Cornell, 1907; proposed by F. C. Holden; seconded by Membership Committee; Nov., '17.

For Re-Instatement.

Charles E. Panoff, 1924 Prospect Pl.; L. I. C. H., 1903; Oct., '17.

Laura M. Riegelman, 43 Lee Ave.; Women's M. C., Balt., 1897; proposed by W. C. Schirmer; seconded by W. V. Pascual; Nov., '17.

Scientific Session.

Paper: "Orthopedic Surgery in its Relation to the War Period." (Illustrated by lantern slides.) By Major David Silver, M.O.R.C., U.S.A.

Discussed by: Walter Truslow, M.D.

Paper: "Social Hygiene of the War." By Major William F. Snow, M.O.R.C., U.S.A.

Discussed by Henry H. Morton, M.D., A. N. Thomson, M.D.

It was regularly moved, seconded and carried that the collation usually served after the regular meetings of the Society be discontinued during the period of the war.

The following resolution was offered by Dr. William Francis Campbell and unanimously carried.

WHEREAS, An amendment was introduced at the last session of Congress to give medical officers in the Army the same rank that prevails in the medical corps of the Navy which should apply to both the regular and reserve corps men; and

WHEREAS, It is essential for medical officers to be equal in rank and authority with the line officers if they are to carry out the duties for which they are held responsible—a fact emphasized by experience in the present war; and

WHEREAS, The medical officer at the present time is without influence simply because his shoulder straps indicate lower rank than the line officer; and

WHEREAS, The medical officer is prevented by the Army regulations from using his influence in his own behalf;

Resolved, That the Medical Society of the County of Kings urges that the Bill proposed at the last session of Congress advancing the rank of medical officers in the Army to the same rank that prevails in the medical corps of the Navy become a law, and that a copy of this resolution be forwarded to our representatives in Congress.

The following nominations were made for officers for the ensuing year:

For President, Frederick C. Holden.
For Vice-President, John A. Lee.
For Secretary, Chas. E. Scofield.
For Asso. Secretary, Lewis P. Addoms.
For Treasurer, Stephen H. Lutz.
For Asso. Treasurer, Robert L. Moorhead.
For Directing Librarian, William Browning.
For Trustee, Albert M. Judd.

For Censors, (5 to be chosen), Onslow Allen Gordon, Jr., John G. Williams, Edwin A. Griffin, O. P. Humpstone, Howard T. Langworthy, Alfred Bell.

For Delegates, (12 to be chosen), Onslow A. Gordon, James W. Fleming, O. P. Humpstone, Mary E. Potter, Siegfried Block, Edwin A. Griffin, Walter A. Sherwood, John A. Lee, Walter D. Price, William V. Pascual, Raymond Clark, Geo. D. Hamlin, R. E. Coughlin.

It was regularly moved and seconded that the Secretary be instructed to inquire of the nominees for Delegate to the State Convention whether, if elected, they would attend the State Meeting. Meeting adjourned at 11 p.m.

LEWIS P. ADDOMS,
Asso. Secretary.

Society Transactions

TRANSACTIONS OF THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting of the Society held November 1, 1917. In the absence of the President Dr. Walter A. Sherwood acted as Chairman.

Splenoma of Supernumery Spleen.

William Linder, M.D.

Ignatz B, 44 years old, was admitted into the service of Leon Louria, July 17, 1917.

Past History: Father died of a tumor of the bladder; mother suffered from "inflammation of the spleen." Denies luetic infection. Has had a left inguinal hernia for five years.

Recent Illness: He had noticed that his hernia had been increasing in size in the last four months. He had no pains or discomfort in his abdomen, slept well and had a good appetite. He claimed to have lost 25 pounds in the last few months. On account of the increasing size of the hernia he went to his physician who discovered an abdominal mass. On account of this tumor he entered the hospital.

Examination: This revealed an apparently robust man. There were no glandular enlargements. Heart and lungs negative. The left upper quadrant of the abdomen was filled by a large soft mass which extended to the level of the umbilicus, and was thought to be an enlarged spleen. The liver was palpable two finger breadths below the free border of the ribs on the right side. There were no other masses, and no areas of tenderness or rigidity. Temperature 98.6 F.; pulse and respirations normal. On inflation of the colon, this tumor mass persisted anteriorly. X-Ray examination of the gastro-intestinal tract was normal except for the stomach being pushed over to the right. Urine showed a faint trace of albumin, and many white blood cells. W.B.C. 8,400: Polys. 66%, monos. 4%, and lymphos. 30%. R.B.C. 3,800,000: Hb. 80%. Feces revealed no occult blood. Blood pressure systolic 110, diastolic 75. Wassermann on blood negative. Moderate left inguinal hernia.

Operation: A laparotomy was performed July 30th. A straight upper median incision was made. Free fluid was present in the peritoneal cavity. Two soft very vascular tumors connected with one another by a broad base, each the size of a grape fruit, were found in the left upper quadrant of the abdomen, arising between the leaves of the gastro-colic omentum. The mass had a pedicle containing the blood vessels and was in no way connected with what was demonstrated as a normally situated, and normal appearing spleen. The stomach, kidneys, and intestines were found normal and in no way connected with this mass. One lobe of this peculiar tumor tore in manipulation and discharged about one quart of blood from what appeared as a cystic cavity inside. The other lobe was not cystic. The pedicle going to the tumor was ligated and the entire tumor removed. The abdominal wall was closed in layers.

After Course: The patient directly after operation developed a pneumonia of the right lower lobe. His temperature ranged around 103.4 F, his pulse averaged 120, respirations 30. Cardiac failure and pulmonary edema supervened and the patient expired on the eighth day after operation.

Pathological Examination: The tumor consists of an endothelial reticulum, throughout which are scattered numerous small round cells to all appearances lymphocytes. These cells are arranged in a definite and orderly manner, and exhibit no evidences of malignancy—such as mitosis, irregularity of size or shape, or infiltration or breaking through the capsule. They seem to partake in a very definite function—in that they surround blood sinuses in which are red blood cells in various stages of degeneration. The blood vessels are not rudimentary, nor embryologic. They traverse definite channels. They are well formed and mature, not at all like blood vessels in malignant tumors, especially the sarcomata. The location of the original tumor, its vascularity, appearance, shape, color, hilum, pedicle carrying artery and vein speak for the splenic origin of the tumor. The only argument against the diagnosis that can possibly be raised is the absence of Malphigian bodies. In the presence of an abnormal condition and the fact that an accessory spleen is only a rudimentary organ, it is possible that in its tremendous hypertrophy and hyperplasia, the growth has limited itself to the splenic pulp at the expense of the malphigian bodies. The presence of a normal spleen in the usual site is against this being a primary or secondary splenomegaly.

Splenic Hodgkins Disease.

William Linder, M.D.

J. H. No. 45, 105, Lottie C., 55 years old, was admitted September 6, 1917, into the service of Dr. Leon Louria. Menopause 5 years ago. She never had Typhoid fever to her knowledge. Six weeks ago, she began to have sticking pain in her left lower abdomen. This was constant, without radiation, and persisted until admission. Lately she has been constipated, and defecation painful, but without bleeding. Sour eructations occasionally present, appetite good. She has lost considerable weight and strength. A burning sensation in the back has lately made its appearance. Pain prevents sleep. No vomiting.

Examination shows a very pale poorly nourished female. Systolic murmur at apex. Abdomen distended. Left hypochondriac area prominent, dull on percussion, and on palpation reveals a mass extending to the median line and to the level of the umbilicus. This mass was firm, smooth, not nodular, and moves slightly with deep inspiration. The first four days after admission the patient's temperature ranged between 101 and 105 F. This in the light of subsequent developments was directly attributable to Hodgkins disease. Then after these five days the temperature remained normal for the next 5 days which preceded operation. R.B.C. 2,490,000; Hb. 75%. W.B.C. 7,800; Polys. 61%, Lymphos. 31%. Blood-pressure 130-60. Widal reactions on two occasions were positive 1 in 20; incomplete 1 in 60 and 1 in 120. Gastric analysis of test breakfast removed 45 minutes after meal revealed free Hcl 7, combined acid 14, total acidity 27; no blood, no lactic acid, no retention. Feces—chemical blood; no Typhoid bacilli; small amounts of mucus and pus present, bile present; no parasites or ova. X-ray examination of gastro-intestinal tract; stomach empty in 6 hours, greater curvature indented in proximal half, apparently due to pressure from an extragastric mass. Colon normal, except for displacement downward of splenic flexure by same mass. Cystoscopy—bladder and ureters normal. Kidney function normal on both sides. X-ray of left renal area—outline not discernable due to overlying mass.

Catheterized specimen of urine—many bladder cells, few renal epithelal cells, few red blood cells, many pus cells, Bacillus Coli. Inflation of colon from below—mass not displaced, felt more prominent anteriorly. Blood culture sterile. Wassermann negative. Eye grounds negative.

Operation Sept. 24, 1917. Splenectomy. Left upper lateral incision. Mass found intraperitoneally, adherent to omentum anteriorly, and to stomach and tail of pancreas posteriorly. Mass identified as spleen. Vessels entering hilum clamped with difficulty. Spleen removed. Mikulicz drain under left dome of diaphragm. Wound closed in layers. For several days at a time after operation the temperature in spite of continued drainage of the left sub-diaphragmatic suppuration, would shoot up. This is very likely due to the Hodgkins disease still present.

The spleen on microscopic examination revealed several large yellow areas from the size of a half-dollar to an orange on cut section. Some of these areas reached the outer surface. Microscopic examination revealed these areas to be infarctions of the anemic type. The rest of the spleen showed the typical lesion of Hodgkins disease.

The patient after operation was relieved of her pain, though she is still weak, and very pale. She has now, observable for the first time many very hard discreet glands in both supraclavicular areas, both axillae, and groins, and around the left iliac vessels. The removal of one of these glands of the left inguinal region reveals a definite picture of Hodgkins disease on microscopic examination. More recently the patient shows light purplish infiltrations of the abdominal wall involving the site of the incision. These areas are usual discreet from one another. Histological examination of one of these areas reveals a true Hodgkin's picture.

Epicrisis: The absence of discernable glands before operation rendered the diagnosis almost impossible. In the light of developments, the temperature curve, the smooth hard spleen, the profound anemia without appreciable cirrhosis of the liver, ascites, or gastro-intestinal hemorrhages should have put us on the right track in spite of the absence of typical glands and skin infiltration until a later period.

Chorioepithelioma of the Liver.

William Linder, M.D.

J. H. No. 45205, Gussie R., 26 years old, admitted Sept. 13, 1917 into the service of Dr. Leon Louria. She was married 2 years, and had a baby one year old. She has had no miscarriages. Her last regular menses was July 18th, eight weeks before admission. Six months ago she began to expectorate blood, coughed a great deal. There was no fever. She went to the country for a few weeks, and came back feeling better. During the last four weeks before admission, she has lost her appetite, lost weight, and become very weak. She vomited after everything she ate, bringing up blood-tinged mucus. A constant dull epigastric pain and nausea were present. On a few occasions the bowel movements have been tarry. Examination revealed a very pale and weak young woman, constantly retching and bringing up small quantities of bloody mucus. An elevated mass of small size was noted on her hard palate on the right side close to the alveolar border. This was erroneously interpreted as an epulis. There were no enlarged cervical glands. The lungs revealed scant rales. A soft systolic murmur could be heard at the apex. A nodular mass was palpable in the left hypochondrium, reaching the umbilicus and apparently continuous with the right lobe of the liver. This mass moves with respiration and is slightly tender. On the right labium majus was present a round, tender, purplish mass the size of a dime—which in the light of subsequent findings was no doubt a metastasis. Vaginal examination showed the uterus only a trifle enlarged, firm, and freely movable. Rectal examination was negative. Urine—faint trace of albumin, and moderate amounts of acetone and diacetic acid. W.B.C. 10,400; Polys. 80% R.B.C. 3,320,000; Hb. 50%. Feces showed blood repeatedly. Blood-pressure, systolic 110; diastolic 70. X-ray of stomach revealed slight retention of bismuth meal, and no evidence of organic defect or adhesions. X-ray of right upper jaw revealed no osseous lesion.

The patient's symptoms persisted—she grew weaker, was constantly retching, losing weight, and developing a profound cachexia. On the 18th of September the patient was observed to have a slight foul smelling vaginal discharge. This lasted 5 days and was interpreted as a normal menstrual period. On the 19th of September the lesion on the palate began to bleed and this continued in slight amounts on subsequent dates. The temperature ranged between 98 and 100.5 per rectum. Pulse was continuously high, between 108 and 140. Respirations 24-30. Wassermann on blood was negative. X-Ray of lungs was reported negative. Sputum—no Tubercle bacilli.

October 7th, 3 upper molars were removed on the right side, and the growth in that region was excised. This was at first reported by the pathologist as an epulis undergoing necrosis and suppuration. Later studies proved this to be a chorioepithelioma metastasis. On October 15th, on account of the patient's state of inanition it was decided to do a laparatomy. The case was transferred to the surgical service of Dr. Wm. Linder. Exploration revealed a large left lobe of the liver, which was the seat of a crop of nodules on its under surface. These were of various colors, some being pearly gray and black like a melanosarcoma.

The antero-posterior diameter of the left lobe of the liver was about 3 inches as a result of these metastatic nodules. On the under surface of the right lobe a similar crop of nodules were present. A nodule was excised for microscopic examination. The peritoneum, stomach and other viscera were seen to be free of anything that could be interpreted as either primary or secondary growths. In a loop of ileum was observed a moderate amount of free blood. Jejunostomy was performed for feeding purposes. The microscopic examination of the liver specimen was first reported after the patient's death and burial. It was then too late to exercise the vulvar nodule or examine scraping of the uterine cavity.

Epichisis: The pregnancy responsible for this condition occurred one year before admission or six months before the first evidence—which was a cough and hemoptysis due to a metastasis in the lung. The vomiting can be attributed to the lesion in the liver. The melena while possibly due to a hemorrhagic diathesis which frequently accompanies malignancies, may be more readily explained by some small unrecognized metastasis in her upper ileum. The patient died of exhaustion October 23d. The rapid progress of this case is typical. The lesion in the uterus may have been very small or entirely have disappeared to account for the lack of the usual early terrific metorrhagia and enlarged uterus of the typical case. The vulvar location of metastasis occurs in 75% of reported cases and should have made the diagnosis had one thought of the possibility of Chorioepithelioma.

Bilateral Cystic Mastitis. Specimens.

William Linder, M.D.

J. H. number 45722, Hattie W, was admitted October 10th, 1917. She accidently noticed a slight lump in her right breast two months before. This has increased in size since. Pain has appeared lately but no loss in weight or strength. Examination shows both breasts large and pendulous. The right one, in its upper outer quadrant, contains a lump about twice the size of a goose egg. That is irregular in outline, and very resistant, but not attached to skin or chest wall. The nipple is not retracted and shows no discharge. There are no axillary or supraclavicular glands palpable. There are present a few smaller separate lumps in different parts of the right breast. The left breast contains many similar small tumors.

Operation done October 12th. Bilateral mastectomy. No exposure of axillae. Microscopic examination—chronic mastitis with poly-cystic formation.

I am greatly indebted to my assistant Dr. Meyer Rabinowitz, for the help he has given me in the preparation of these cases for report.

Tuberculosis of the Kidney. Patient.

Dr. Chas. H. Goodrich

This patient, 25 years of age, came into my service at the Methodist-Episcopal Hospital on the 6th of April, 1916, having suffered for 7 years with intermittent attacks of pain lasting a few days each time, extending over a period of 7 years. The pain was located in the upper left abdominal region and back and it was described as cramp-like in character. She had, four months previous to admission, begun to have this pain continuously and had begun to have more or less increased frequency of urination. These symptoms increased and she lost flesh and strength until she came to the hospital for relief. At the time of her examination she was moderately anemic. The Wassermann was negative. Her thorax was negative and her neck was negative. Her abdomen showed what seemed to be a very much enlarged kidney. The X-ray plate confirmed this and Dr. Langworthy's cystoscopy and catheterization of the ureters showed a normal ureter on the right side and on the left side a patulous and irritated ureter opening, exuding no urine, and upon catheterization a small amount of pus and urine mixed was obtained. On the left side the phthalein test was slow, the first sign appearing in a little less than an hour. A diagnosis of a tuberculous kidney was made and a nephrectomy done, the double ligature method being used, and our patient made a very satisfactory recovery, except for one point. After about 8 days of practically normal temperature she had a rise of temperature which continued for several days, but which subsided just before she left the hospital. In a short time after leaving the hospital, however, there came a discharge from one end of the wound, and this has since been discharging. That is one of the points I want to bring up in connection with this case. She has gained 25 pounds and seems perfectly well, although the wound has been sometime in healing and will be.

In a series of 9 cases of tuberculous kidney removed I have twice followed the technique of injecting into the ureter 35 minims of chemically pure phenol. All of the 9 patients were closed without drainage and the two in which I made this phenol injection have both opened up at a late period. In the other cases I have treated the ureter by swabbing its entire length as nearly as I could tell it, with an applicator saturated with the carbolic, but in these cases where the injection of phenol has taken place both wounds have opened up later, and we all know how long it takes wounds in tuberculous cases to close, however generally healthy the patient may be. I am inclined to think that I should not follow this technique further, although the cases are rather small in number to prove a point.

I have had this patient put on the program particularly because we had one of the most beautiful specimens I have ever seen. Unfortunately, however, on trying to get the specimen the pathologist could find no trace of it. Fortunately Mrs. Goodrich was kind enough to make a sketch of this kidney with the kidney lying down. That shows the lesion. Another particularly interesting feature of this case to me was the probable existence of it for so long a time before a marked effect upon the organism took place. I believe, in all probability, there was some mixed infection, although there was no culture taken at the time of the operation.

Some Unusual Fractures. Lantern Slide Demonstration. Patient.

Dr. Chas. H. Goodrich

This young women was injured on the 31st of May, 1916. She was thrown down by an automobile and received injuries of a superficial character to the face and body, but the bulk of her injury was to the right upper extremity, extensive abrasions of the forearm and hand and a lesion of the shoulder which at first we diagnosed as a fracture of the surgical neck, but which, upon closer investigation, seemed more like a separation of the epiphysis. I have the lantern slides to show you a little later.

The instructive part of this case to us was the fact that we couldn't obtain a satisfactory adjustment of the fragments until we had this arm in overextension and until we had put on an extension apparatus with 6 or 8 pounds' weight and left it on for some 4 weeks altogether. In that way she obtained a very satisfactory functional result, but, like the other fractures I want to show you tonight, there was not an ideal result, from the standpoint of a perfect anatomical result. The lesion so close to the shoulder-joint with every motion perfect, and especially the backward motions all perfect, I thought might interest you. The difficulty in that case was the fact that we could not put on an extension apparatus for 2½ weeks after she came to us because of the condition of the forearm. There is really no motion that she can not make perfectly, and the backward motions, which are sometimes limited in some of the best of the shoulder-joint lesions, are done with the greatest ease. In fact, she can use this arm back of her better than the other arm. I believe, anatomically, as you examine her there is no possibility of your finding the lesion grossly. The X-ray plates will show it very readily.

Cases Illustrating Five Lesions of the Breast.

Dr. Chas. H. Goodrich

The five breast cases, which I shall mention very briefly ,have been interesting to us, particularly because of the fact that they came in rapid succession; that is, within the space of a few weeks we saw five cases and no two of the lesions were alike, and it was not until the fifth case that we found any malignancy, and in four of the five instances we found very little value in the usual technique of submitting a doubtful tumor to the process of sectioning by frozen section apparatus. Dr. Smith did this for us in four of the cases and in one case it certainly saved the patient an amputation and cleaning out of the axilla.

The first case of the series was a boy of 16 who developed, in a few weeks, a mass about the size of a large hickory nut in one breast, and as this developed rapidly and showed no signs of inflammatory change, we felt it might be sarcoma developing and did an excision of the entire breast, including the nipple, and the pathologist's report was a tuberculous tumor of the breast.

The second case was a woman 40 years of age, who noticed a tumor in her left breast two weeks before she came to our service, and at that time she felt it was not much larger than an English walnut, but had increased to the size of a large goose egg when we first saw it and she insisted it had grown that rapidly. It was irregular and nodular, did not seem sharply defined and was somewhat tender. There was no discharge from the nipple. No glands were discernible in the axilla, but she was rather fat and we didn't feel at all sure of this point. In this case the presence of some semi-fluctuating areas made us a little suspicious of cystic disease on that side, or a cystic mass, and we did a generous excision of the tumor, had it submitted to frozen sectioning at once and the pathological report was a fibro-cystoma. We closed the wound and the patient made a satisfactory and prompt recovery.

The third tumor of the breast followed after an angioma, a superficial and flat angioma, which had existed for many years, and was described by the patient as being as large as a half-dollar, but for about eight months it had become more or less elevated until it resembled the appearance of about half a peach projecting from the surface of the breast. It was soft, felt in consistency like a lipoma, and was so considered by the physician who first saw it. This was removed by an elliptical incision and sent to the laboratory for frozen section and the report came back in a few moments that we were dealing with a small round cell sarcoma, but entirely separated from the capsule of the breast itself, and we thought it best to do an excision of the breast in this case. I should have said, by the way, that this woman is 55 years of age.

The fourth case was that of a woman 35 years old who had noticed but recently the presence of a small nodule in the lower left quadrant of the left breast. She came to us for diagnosis. It was hard and at the same time had a cystic feel. It was excised and frozen section showed that it was a cystadenoma of the breast.

The fifth case was a woman 60 years of age who had had a nodule in the inferior portion of the left lower quadrant of the left breast for between two and three years. It had never been painful. There had simply been a lump there which, as she said, had not troubled her. It was not adherent to the skin nor was it adherent to the fascia of the chest wall beneath. The growth was not larger than a small English walnut and seemed fairly well defined, but was suspicious of carcinoma. It had existed so long, was very firm and quite hard (not of stony hardness), that we thought it probably was a carcinoma. At the same time we made a section from it and frozen section showed it was a scirrhous type of carcinoma. In this case we did a radical excision by using the Stewart incision, making it possible to take in some of the axillary skin and the extra-triangular area from the lower inferior arm of the wound so as to take in a portion of the skin and fascia of the lower abdomen.

It has seldom been our experience that in five consecutive tumors of the breast there was only one case of malignancy.

A Case of Multiple Exostoses. Patient.

Dr. Chas. H. Goodrich

I am taking the liberty of showing you a case in which I have been interested for some time (the case is not on the program), showing a lesion that is rather unusual and an extremely typical case.

This young man is 18 years of age now and when he was 12 years of age he began to show in various parts of his body some bony swellings which have increased more or less in size until he is recognizable as a typical case of multiple exostoses of the cartilaginous type.

When he came under our supervision we went very carefully into his history and into the various features of his case, and it can be completely summed up as follows:

His father, one brother, an uncle and his grandfather all suffered from these exostoses, but none to the extent with which he is involved. There are no cases on the maternal side of his family.

We had four Wassermanns done on this boy. As you probably all recall, people have tried to make these cases either due to specific disease or to rickets or to some rheumatic tendency, but there is very flimsy evidence that any of these conditions are responsible for this type of growth. The probability is that there is some inherent disease of the cartilage from which these growths develop or spring from the epiphyseal cartilages, although extending into the bones close by. Rickets can exist in the same child as this disease, and as I will show you in these forearms and in the pictures, there are undoubtedly—(remarks not completed).

The braces were put on him because in the first days in which he was under our observation he had such a tremendous extension of the cancellous bone in the upper tibia and the lower femur and so very little cortical bone, that he was tending to have a very marked knock-knee and the danger was in it. The braces were made so as to enable him to get about and earn his living without danger of fracturing the femori and the tibiae.

One of the most interesting features of these cases is the way in which heredity plays its part. As a matter of fact, the majority of these cases seem to go along the male line. A series of 213 cases were reported in 1914 and of these 169 had been transmitted directly in the male line, and in many of those cases in which there was no transmission in the male, from father to son, from son to son, there was no history of any heredity, but it is probable that none of the cases developed de novo, because it has been demonstrated in a number of instances that it is possible for the heredity to pass through the female offspring and even through two female offspring and still develop in the next generation of males.

I have another case of this type in which the hypertrophy of the cancellous bone is not so marked and had hoped to present here tonight, but had not been able to do so. The X-ray plates have also mysteriously disappeared. I was able in that case to remove all the growths (about nine in number) and the patient is very comfortable. He had one very large growth on the anterior surface of his femur.

In this particular boy I thought it was better to wait for a considerable length of time so as to permit his bones to develop more of the cortical covering before undertaking very much surgery. He is very anxious to have a number of the growths removed, especially those about the upper humeri, but he does not present a particularly advantageous case at the present time because almost all of the ends of the bones, excepting the largest growths, are made up of cancellous bone. There is almost no cortical bone there, whereas later on they may develop more.

Some Unusual Fractures. Lantern Slide Demonstration.

Dr. Chas. H. Goodrich

Remarks introductory to Lantern Slide Demonstration.

The pathological fractures usually are associated with one of three conditions:

Some general systemic disease;

Some local infection or inflammation; or a

Neoplasm.

In the case that I will show you on the slides, a case which we have recently had, there was a neoplasm. A woman 68 years of age was doing some housework in her kitchen and turned suddenly to pick up an article from a shelf behind her when she felt something give in her left thigh and fell to the floor. She had had in that "hip," as she called it, for a period of over a year, some rheumatic pain. The X-rays show a growth of the upper femur where the fracture had taken place and it was a question in our minds, of course, whether we were dealing with a primary sarcoma, or myeloma, with a secondary carcinoma, or hypernephroma, or a mass of bone cysts which were benign. We made a very careful investigation for the existence of a hypernephroma or some malignant growth in some of the usual organs where malignant growths are found, but could not determine the existence of any such growth. She had not had any operation for the removal of any kind of a growth.

Remarks during Lantern Slide Demonstrations:

That shows the fracture which was in the upper third of the femur. That is one aspect of it. The next slide will show a different view and we were at first a little in doubt as to what to do. All sorts of methods of treatment occurred to us, but the X-ray plates did not seem to answer for sarcoma or myeloma if primary. I felt we could rule out a secondary malignancy and we assumed it was a bone cyst formation and proceeded to treat her as though we expected union to take place, although in elderly subjects, it is the rule to cut down on the case and eliminate the bone cyst by curet or excision. This does not show as well as we would like to have it. (Reference to "the fact that union was taking place" and "cancellous formation was taking place." That perhaps shows up a little better. We kept this women in extension for a matter of seven weeks, and these two views are the final plates which we have had made, and there is firm union. The thigh seems as firm to the examining hand as a thigh ever did. I have permitted her to get about on crutches bearing some little weight. On two occasions I permitted her to bear her full weight on the limb when I was with her. I have kept her from using her full weight on the limb. All the pain has been absent ever since about four or five days after the accident. She has never had a return of the rheumatic pain which she had before. There is obliteration of a good many hollow cavities that existed there before. She seems to be in very excellent health, is happy and I believe has a fairly useful leg, although it is not an anatomically perfect leg. It is a useful leg with five-eights of an inch of shortening and it is far more comfortable than if we had assumed it to be malignant and amputated it at the hip or attempted to do a bone graft or even attempted to currette away the cystic disease.

More than two years ago there came to me a man who had been injured on shipboard and had sustained a spiral sub-trochanteric fracture. This lantern slide is different here, but at this point you can see the line of the outer fragments and here is the line of the upper and outer fragments and here is the main shaft of the bone. When he came to me ten weeks after his accident his leg was in abduction, marked internal rotation, and he had three and a quarter inches of shortening. He had a useless leg. I felt it was a difficult proposition to negotiate. At the same time there was no question but what he had to have some relief for that condition. I did what seemed to be the simplest thing. I cut down on the outer side of his thigh and simply chiseled the line of union across and brought the lower fragment as nearly as possible in a line with the upper, although it was impossible to pull it down very much; there was still some overriding, as you see, above the spiral end of the fracture and I put him up in a plaster case with about 45 degress of abduction and a Buck's extension apparatus on to that. That is the last X-ray which we had taken just before the patient left the hospital and shows the way in which he got union. I wanted to show him here tonight. He is a mate on a Coastwise steamer, the steamer on which he was injured, and had to leave port yesterday morning. He was very sorry not to be able to present himself. I measured him again yesterday. He now has seven-eights of an inch of shortening and wears a little thicker sole on that shoe, not more than a quarter of an inch, I should judge. He walks without any apparent limp. He says he can do everything he did before and has no discomfort in that leg except in the ankle where he suffered a fracture at the same time he suffered the fracture of the femur. It is not an ideal anatomical result, but it is absolutely satisfactory functionally, and he is very content with the result, and I am sure it was better to do the simple thing there and treat it as a fresh fracture rather than attempt to do more radical or elaborate surgery.

This is the first picture of the little girl who was here before you and shows the head of the bone in the glenoid cavity with the broken surface facing outward and an upward dislocation of the lower fragment I believe it was an epiphyseal separation, although it doesn't answer for all the description of such. We tried moving it into place by manipulation, but failed. At that time we didn't recognize it as an epiphyseal separation. Then we felt that the only thing to do was to bring the arm out at right angles and we did that with some measure of improvement and yet we were not satisfied with that and increased the angle and put on the extension, which gave us that. It was not satisfactory anatomically, but we felt it would probably give a satisfactory functional result, with probably no difference in the growth of the bone. Our final result, six months later, was that, and I believe the little girl will always have a useful arm.

These are the lesions of the boy with multiple exostoses. You will see in many places how very thick the cortical bone is and how much of the cancellous bone there is in the state of over-development. This is one of the upper humerus, and there is the other. Her is the nodule which I think most of you felt. You will notice the rarefaction tendency in the outer end of the clavicle and the acromion process. The same condition you see in almost all the ends of the long bones. The forearm, you see, shows some lack of development and some of the changes of the exostoses. There was one thing which I did not mention while he was here and that was this: we did a Wassermann on his brother (his father is dead) and on the mother. The mother's Wassermann was done on the same day as that of the boy and his brother. The mother's Wassermann was 4-plus. The pelvis shows changes in both ilia. There are changes in the upper extremity of both femori. The knees, the lower femur (femori) and upper tibia (tibiae) show the most marked change. In fact, when we first saw the X-ray plates we felt we were dealing with a myeloma, but in discovering the other lumps we realized our error. The appearance is not unlike the X-ray of the myeloma, I believe. Here is perhaps a better plate of the femori and tibiae.

Tuberculosis of the Kidney. Patient.

Cases Illustrating Five Lesions of the Breast.

Dr. Chas. H. Goodrich

Dr. Charles H. Goodrich:

"I simply wish to emphasize what Dr. Duffield has called our attention to, namely, the importance of the symptom of over-frequency of urination. I have repeatedly spoken of that to the young men on the house staff for two or three years. I do not believe that in any case of over-frequency of urination we should leave out of consideration the possibility of a tuberculous kidney.

"In regard to the question of frozen sections: I believe Dr. Downey is perfectly right when he says that we may depend too much on frozen sections. At the same time, given a local, not diffused, lesion in the breast, I believe a frozen section will assist us. I believe we should never have it uncorroborated. All these diagnoses were corroborated later by regular permanent sections, and I believe that is of the utmost importance in every case.

"I was going to add regarding the tuberculous kidney that my belief is that in those two cases in which there took place a later low grade suppuration that the phenol was in sufficient quantity to spoil my ligature on the ureter and it escaped into the tissues and set up an irritation and inflammation there from its presence, or from the leakage of some infected urine from the ureter. I believe I should not do that again."

Hodgkin's Disease of the Spleen. Specimen. Bilateral Cystic Mastitis. Specimens. Chorioepithelioma.

William Linder, M.D.

Dr. William Linder:

"I would like to hear if any one has operated on a splenic Hodgkin's disease.

"Cystic mastitis frequently can not be differentiated from early carcinoma of the breast.

"The point of diagnostic importance was the fact that the symptoms were of only a few months' duration. The woman was apparently well, she had no cachexia, there was no adhesion of the skin and no retraction of the nipple. These factors rendered the diagnosis of non-malignancy fairly safe and made advisable the removal of both breasts.

"I am sorry that no one discussed the chorioepithelioma because it was the first case of its kind I have ever seen.

Tuberculosis of the Kidney. Patient.

Dr. Chas. H. Goodrich

Dr. Warren L. Duffield:

"I would like to call attention very briefly to a woman whom I saw a few months ago. She had a moderate degree of cystocele. Her only complaint was of frequency of urination. On having the urine examined it showed a pyelitis. Cystoscopic examination developed the presence of a very marked tuberculosis of the left kidney, which we removed. There was comparatively little of the left kidney substance remaining. She had absolutely no symptoms referable to the kidney except the urinary disturbance—the frequency of urination, which I attributed at first to her cystocele."

Cases Illustrating Five Lesions of the Breast.

Dr. Chas. H. Goodrich

Dr. Warren L. Duffield:

"I would like to add to Dr. Goodrich's series of cases one that seemed to me to be of unusual interest. A man about 42 years of age, came to the hospital originally because of inability to retain anything on his stomach. He would eat for a period of about two days and then vomit the food taken during that time. Clinically, he passed nothing through his pylorus. X-ray examination of the stomach showed the same thing. No bismuth passed through. We did a gastroenterostomy upon him and following that operation he gained some 20 pounds. At the time of operation there was a mass found in the pyloric region which I took to be malignant. I did not cut into the mass, but removed the gland for examination. The pathologist's report was that it was a carcinoma. About four months later he returned with a mass in the left breast. The left breast was swollen, reddened and tender. The glands in the left axilla were markedly enlarged. I should have said that prior to my operation on his stomach he had had glands removed from the neck. I dissected out the left breast and axilla and found the axillary contents badly matted together and undergoing caseous degeneration and the pathological report on the breast and axillary glands was a combination of carcinoma and tuberculosis."

DR. JAMES M. DOWNEY:

"I think that where we sometimes fall down on the diagnosis of breast cases is in depending too much upon frozen sections. That simply means there is an excision made by the surgeon and a section of that particular part of the breast examined. I feel the entire breast should be examined in all cases. Not only that but the axilla should be opened up and if any nodules are found there, they should be examined. To make a diagnosis on a part of the breast simply on frozen section is, I think, the reason why we sometimes make a serious mistake."

Bilateral Cystic Mastitis. Specimens.

Dr. William Linder

DR. JOHN E. JENNINGS:

"There is no doubt in my mind about the wisdom of excising such breasts.

"While the diagnosis of chronic cystic mastitis can readily be made in many instances, in others those breasts will contain small nodules of adenocarcinoma which are impossible to recognize by physical examination and can only be determined by a very careful microscopical analysis of almost the entire breast. Certainly in those cases the breast should be removed. I think it is good practice to section them at the time of removal and if small suspicious nodules are found to have them frozen and sectioned to determine the presence or absence of malignancy. If malignancy be present radical removal of the axillary glands is in order and removal of both breasts is also necessary, without question. While one breast shows the process more markedly advanced than the other, the breast that is less advanced may have in it a nodule of carcinoma.

"A few years ago I saw a case in which one breast was removed and being somewhat suspicious at that time (this was 11 years before) of carcinoma, the glands in the axilla were cleaned out. On microscopical examination it was found that no cancer was present, and when the second breast developed a little further, a year later (that is, 10 years before seeing the case), that breast was removed. When I saw the case, the breast which had been removed second, in which the axillary contents, had not been removed, the axillary and supra-clavicular glands were the seat of carcinoma. In all probability, if both breasts had been removed at the time the first breast was removed, she would not have had a metastasis. If, on the other hand, the second breast had been as carefully supervised as the first, malignancy might have been discovered and the axilla cleaned out and the patient would have had a very much better chance. Certainly 10 years later it was evident it was a small nodule or adenocarcinoma in a very marked malignancy."

Paper: Circulatory Disturbances of the Extremities.

(see p. 452)

Dr. Warren Duffield

DR. JOSEPH RAPHAEL:

"There is unfortunately, considerable confusion in regard to the diagnosis of these allied conditions. It is interesting to note that the literature today contains very few, only occasional, references to Raynaud's disease and erythromelalgia, whereas there is a very large literature on thromboangiitis obliterans. Many conditions that existed before and were known as Raynaud's disease are now classified under the heading of thrombo-angiitis obliterans. Most of the cases reported are reported as thrombo-angiitis obliterans. This is possibly due to the fact that there is a definite pathology which is accepted by some investigators as thrombo-angiitis obliterans. The pathology of even such a condition as erythromelalgia was discussed as late as 1908 by Dr. Bernard Sachs, of New York, and he referred to some cases which showed evidences of a thrombotic change—thrombo-endarteritis. When reference was made to this by Sachs, Buerger answered by saying that the thrombotic changes were not characteristic of erythrombelalgia, but were characteristic of thrombo-angiitis obliterans. If we remember this pathology, that it is thrombatic and that not only the superficial but deep arteries and veins are involved, the futility of anastomosis will be apparent. Tying off the femoral vein will not cause any increase in the circulation to the part, if the vessels are thrombosed.

"I think Stetten had some pictures of guinea pigs taken, in which he made an anastomosis, afterwards demonstrating the circulation, and he showed the circulation did not extend to the extremity. These were normal animals and not individuals suffering from thrombo-endarteritis of the vessels. If the circulation did not extend to the extremity in those cases it would be likely that it would not extend to the extremity in the cases which had the thrombotic condition.

"Meyer referred to the condition of the blood as a cause for this pathological condition in the extremities. He was not satisfied with the diagnosis of an inflammatory condition for the simple reason that it was unusual for an inflammatory condition to occur in one sex and in a certain people, although it is not necessarily confined to those people. He felt that it might be due to the blood.

"If we accept such an etiology we can see why some cases would be benefited by the injection of these salines to prevent coagulation. If, however, we have an obliteration of the terminal arteries, I do not see how it is reasonable to hope that we are to get any relief. Such experience as I have had with the use of saline injections hasn't been entirely favorable. Cases presenting an obliteration of the dorsalis pedis artery have come to amputation.

"Even though we accept the etiology as that of some blood condition, we are confronted again with the difficulty of understanding why it is that the males only are attacked and why it should attack possibly a limited number of people or a limited people. If it is true that the condition is not inflammatory, but a blood dyscrasia, then we are on the right track and this treatment should be continued.

"I think that at one of the meetings last year Dr. Barber reported a case definitely relieved by hypodermoclysis of Ringer's solution.

"These cases, however, do not cover a period of months. They are essentially chronic. In the cases which I have had the history has covered a period of years and it is important to remember that treatment must not depend upon observation lasting over a period of a few months, but must depend on observation lasting over a period of years."

Dr. Joseph P. Murphy:

"I would like to ask Dr. Duffield if he noted in the literature any remarks on the frequency with which this disease is associated with Dupuytren's contraction. I have a case at the Coney Island Hospital at the present time in which one leg was amputated when the patient came in. Two injections of Ringer's solution have resulted in relief to the patient. I would like to inquire if there is any relation between the cause and effect in those cases."

Dr. William Linder:

"I wish to discuss the surgical treatment of these cases and to recommend a very conservative attitude. Formerly I was of the impression that only amputation high up would give the best results, but in recent years I have assumed a very conservative attitude in diabetic gangrene and particularly so in cases of obliterating endarteritis. Even in the absence of pulsation in the dorsalis pedis or posterior tibial arteries I would just confine my surgery to the gangrene of the particular toe or toes. I usually remove the metatarsal bone in order that I may have a big wide flap. I frequently have had absolutely no bleeding and tied not a single ligature to a pumping vessel, and yet I have had good union in these cases.

"Recently, I have been very fortunate, and have demonstrated the value of the use of Dakin's solution. Ordinarily, these amputation cases after four or five days will show a wound with a gangrene slough. The tube of Dakin's solution is covered over with gauze so as to fill up the entire gap of the removed part of the metatarsal bone. When you take the tube and gauze out you find nice granulating tissue. I never saw a man suffer so much as did the man in my last case. On two or three occasions when I was at his house, I found a typical cyanosis of his foot. The pain was so severe that it was necessary to administer a half a grain of morphin two or three times a day. Still I wouldn't do anything until he showed the presence of gangrene of one toe and then I had him removed to the hospital. I removed the toe and the metatarsal bone. Seventy-two hours post-operative, the wound showed nice healthy granulation tissue. I think the case will heal up by the characteristic hard, scar tissue produced by Dakin's solution, and the man will leave the hospital in four or five weeks from the time he entered.

"I had a very interesting case ten years ago, in which both lower limbs were amputated for the same condition. This patient entered the hospital with typical symmetrical gangrene involving all the fingers of both hands. I removed every one of the fingers (probably Dr. Duffield remembers that case) and left him possibly an eighth of an inch of the fingers—almost on a level with the webs. All the stumps granulated over. He is able to stick a pencil in there and has been earning his living for the last ten years as a bookkeeper.

"I have cases of ten or fifteen years' standing and every once in a while they have a little gangrene and exfoliation and the patient learns to treat it himself.

"Most of the cases which I see in the office come in with a history of having had an ingrown toe nail removed, and that although a period of two or three months had elapsed, the part failed to heal up. I feel that this is something well worth keeping in mind. The possibility of a circulatory disturbance must then be considered."

Dr. Warren L. Duffield:

"In answer to Dr. Murphy's question I would say that I made a fairly thorough search of the literature for the past six or seven years and found no reference to the condition he speaks of.

"I second what Dr. Linder has just said about conservatism in these cases as well as in diabetic gangrene."

Medical Book News

BOOK REVIEW SUPPLEMENT TO THE *LONG ISLAND MEDICAL JOURNAL*

Edited by JAMES M. WINFIELD, M.D.

All communications, books for review, etc., should be addressed to the Editor of this Department, 1313 Bedford Ave., Brooklyn, New York

1917, No. 3 DECEMBER, 1917 3 PAGES

FUCHS' OPHTHALMOLOGY.

TEXT-BOOK OF OPHTHALMOLOGY. By Hofrat Ernst Fuchs, Professor of Opthalmology in the University of Vienna. Authorized translation from the twelfth German edition; completely revised and reset, with numerous additions secially supplied by the author, and otherwise much enlarged, by Alexander Duane, M.D. With four hundred and sixty-two illustrations. *Fifth Edition.* Phila. and Lond., J. B. Lippincott Co., 1917. 1,067 pp., 8mo. Cloth, $7.00.

ABOUT twenty-five years ago, Dr. Duane rendered the profession a very valuable service by translating into English Prof. Fuchs' "Lehrbuch der Augenheilkunde." Among American readers, this work was almost immediately recognized as a standard text-book upon the subject of opthalmology, and although a number of other excellent treatises were published, yet Fuchs stood *facile princeps.* In fact, it was not at all unusual for doctors to allude to Fuchs' "book on the eye" as being the ophthalmologist's Bible.

A revised and enlarged edition was published in 1908. A third edition appeared in 1911 and the fourth edition in 1913.

The fifth edition, published during the present year, is, in a number of respects, a new work. Much valuable new matter has been added; the translator has, in many instances, amplified by giving explanations and notes of practical value; the chapter on "Disturbances of Motility of the Eye" has been re-written and is worthy of careful study.

The reviewer is asked to call attention to the fact that the price of the book has been advanced to seven dollars; however, the increased price of paper and labor has necessitated this advance.

J. W. I.

DISEASES OF THE STOMACH.

DISEASES OF THE STOMACH AND UPPER ALIMENTARY TRACT. By Anthony Bassler, M.D. Third edition revised and enlarged. 8vo., 881 pp. Illustrated. Cloth, $6.00. Phila. & Lond., F. A. Davis Co., 1916.

THIS work is familiar to the profession through its earlier editions, and is an example of a scholarly treatise on the Digestive System.

We regret that the subject-matter is not better divided for ease of reference. The author acknowledges in no timid language his debt to the Roentgen ray in gastro-intestinal diagnosis, and presents numerous X-ray photographs. A summary of the definite X-ray findings on which he based his diagnosis grouped together as an X-ray chapter would be most valuable.

The laboratory diagnosis and outlined methods are complete, modern and scientific.

Treatment outlined is practical and thorough, and especially the chapter on Splanchnoptosia would recommend the book as a valuable one to be in the office of any practitioner.

ROY UPHAM.

CARE AND FEEDING OF INFANTS.

CARE AND FEEDING OF INFANTS AND CHILDREN. A Text-Book for Trained Nurses. By Walter Reeve Ramsey, M.D. Illustrated. Phila. and Lond., J. B. Lippincott Co., 1916. 290 pp., 8vo. Cloth. $2.00.

A TEXT-BOOK which marshals, for the trained nurse, many of the important facts of the anatomy and physiology of infancy and childhood. The author gives excellent advice for the care and feeding of children, condemns the use of laxatives and warns against overfeeding. A short resume of the constitutional, respiratory, intestinal, and infectious diseases is added.

SEXUAL DISORDERS.

A PRACTICAL TREATISE ON DISORDERS OF THE SEXUAL FUNCTIONS IN THE MALE AND FEMALE. By Max Hühner, M.D. F. A. Davis, Philadelphia, publisher. 1916. Price, $3.00.

THE author is to be congratulated upon producing so excellent a work on a subject that so often receives but scant attention.

In many instances the subject of sexual disorders has been handled unscientifically, in the one under review these classes of diseases are discussed in a broad, scientific manner.

Dr. Hühner has wisely emphasized the fact that sexual diseases should be treated by the genito-urinary specialist rather than by the neurologist; although many of the symptoms are neurological, the cause is generally in the genito-urinary tract.

As all physicians are apt to have patients suffering from some sexual disorder, it would be a good thing if they could have access to this up-to-date and scientific work.

The book contains 295 pages and is divided into eighteen chapters. It is printed on good paper and neatly bound in brown cloth.

COMPARATIVE OPHTHALMOLOGY.

THE FUNDUS OCULI OF BIRDS ESPECIALLY AS VIEWED BY THE OPHTHALMOSCOPE.* A Study in Comparative Anatomy and Physiology by Casey Albert Wood. 145 drawings in the text, also 61 colored paintings prepared for this work by Arthur W. Head, F.Z.S., London. The Lakeside Press, Chicago, 1917. $15.00.

THIS work, in atlas form, is an important contribution to the study of comparative ophthmology. At the outset, the Author gives a summary of conclusions regarding his ophthalmoscopic examinations of many hundreds of species of birds. It was found that the fundi differed so widely, it was frequently possible to recognize the species of bird by viewing its fundus oculi. Also it was found that domestication or prolonged captivity brings about abnormal changes in the eyeground.

Chapter IV treats of the anatomy and physiology of the avian fundus. A description is given of the pecten which is found in the eyes of all birds. This structure is supposed to protect the retina from the rays of the sun. Chapter VI states that atropin, homatropin, etc. does not act as a mydriatic in a bird's eye. Reference is made to the possibility of hypnotizing birds in order to facilitate an ophthalmoscopic examination. An interesting and amusing description follows regarding experiences in hypnotizing a vigorous ostrich in California. After the bird had been thrown down and held, the light from a skiascope was thrown upon his dilated pupils for about five minutes and then he appeared as if in a trance. He remained quiet, without being held, during the examination which occupied some 20 or 30 minutes.

Chapter VIII discusses the effects of domestication of wild birds. Chapter IX describes the fundus in various orders of birds. Chapers X and XI consider the classification by appearances of the eyegrounds. The remaining third of the book contains over 60 finely colored plates representing the ocular backgrounds of various species of birds. A complete description is given in the text, opposite each plate. This atlas will prove interesting and instructive not only to ornithologists and oculists but also to all who are interested in scientific investigations.

J. W. I.

IMPOTENCY AND STERILITY.

IMPOTENCY, STERILITY, AND ARTIFICIAL IMPREGNATION. By Frank P. Davis, Ph.B., M.D. 12mo., 138 pp., cloth. $1.25. St. Louis, C. V. Mosby Co., 1917.

THIS book is rather interesting, but incomplete; it covers a subject which is old and yet of which we know very little from a scientific standpoint. The chapter on "Therapeutics" is based on the author's personal experience and is worth while trying.

PHILIP M. SCHAFFNER.

DISEASES OF THE EYE.

MANUAL OF THE DISEASES OF THE EYE, for Students and General Practitioners, by Charles H. May, M.D. Ninth edition revised. With 377 original illustrations, including 22 plates, with colored figures. William Wood & Co., N. Y., 1917. Price, $2.50 net.

THE ninth edition of May's Manual of Diseases of the Eye is a thorough and careful revision of the previous edition. New matter has been added so as to bring the work up to date. The essentials of ophthalmology are clearly and definitely stated. Technical terms, when used, are fully explained so as to be readily understood by the student. The illustrations have been well chosen and they will help one to gain a better understanding of the text. Although the colored plates in this handbook were not designed to take the place of those in some of the large atlases on the subject, yet these give a fairly clear idea of the abnormal appearance of the more common diseases of the eye. Mention may be made of Fig. 239, Plate XII, which shows exceptionally well the fundus changes in arteriosclerosis, as seen by the ophthalmoscope. Finally it may be said that the popularity of May's Manual is largely due to the fact that the author has strictly adhered to the principle of "saying enough but not too much."

J. W. I.

DISEASES OF THE STOMACH.

DISEASES OF THE STOMACH, INTESTINES AND PANCREAS. By Robert Coleman Kemp, M.D. Third edition. Octavo, 1,096 pp., 438 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth. $7.00 net.

THIS is a most complete volume on the Digestive System, covering the field exhaustively; and has its subject-matter arranged and subdivided in such a manner as to be accessible to the physician who desires to consult it hurriedly. The author devotes considerable space to the Roentgen Diagnosis and seems to have evolved in his mind very definite diagnostic information which is well imparted. Differential diagnosis is completely outlined—a splendid example is the chapter on Chronic Appendicitis, The Treatment of Typhoid Fever, Para-typhoid, and Brill's disease, is so complete that it alone would recommend the work.

The review of Acidosis and Intestinal-intoxication crystalizes these subjects in the mind of the doctor who has followed the work along this line in the journals, and presents something definite and practical both from a diagnostic and therapeutic standpoint.

The chapters on the Pancreas are unusually complete and present this subject in such a manner that if the differential diagnosis of a pancreatic condition is in the physician's mind, the work would solve his dilemma and outline the appropriate treatment.

ROY UPHAM.

ROENTGEN TECHNIC.

ROENTGEN TECHNIC (Diagnostic) by Norman C. Prince, M.D. Octavo, 140 pp., 71 illustrations. Cloth. $2.00. St. Louis, C. V. Mosby Co., 1917.

THIS volume dealing with the elements of roentgen technic is concise and much needed by the beginner. Unfortunately many physicians purchase apparatus from a salesman and after a most superficial course of instruction attempt to do all diagnostic work, shortly coming to grief. Careful study of a book such as the above will help materially in straightening out many points and starting them on the right tract.

Writings of this kind, in English, are so few that only praise can be offered. There are many excellent illustrations of position for examination. In all it is a work that every beginner in roentgenology should carefully study.

W. H. B.

BOOKS RECEIVED.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases review notices will be promptly published shortly after acknowledgment of receipt has been made in this column.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES, for the fiscal year, 1916. Wash., Government Printing Office, 1916. 421 pp., 8mo, cloth.

A THOUSAND HEALTH QUESTIONS ANSWERED. By J. H. Kellogg, M.D., LL.D. Battle Creek, Mich. Good Health Publishing Co., 1917. 775 pp., 12mo, cloth. $3.50.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S. Illustrated. Fourth edition, revised and enlarged. St. Louis, C. V. Mosby Co., 1917. 1,160 pp., 8mo, cloth. $7.50.

THE PRACTICAL MEDICINE SERIES. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Series, 1917. Chicago. . The Year Book Publishers, 1917. Series of 10 vols. $10.00. Vol. 1. GENERAL MEDICINE. Edited by Frank Billings, M.S., M.D., assisted by Burrell O. Raulston, A.B., M.D. Illustrated. 383 pp., 12mo. Cloth, $1.50. Vol. 2. GENERAL SURGERY. Edited by Albert J. Ochsner, M.D., F.R.M.S., LL.D., F.A.C.S. Illustrated. 608 pp., 12mo. Cloth, $2.00. Vol. 3. THE EYE, EAR, NOSE AND THROAT. Edited by Casey A. Wood, C.M., M.D., D.C.L., Albert H. Andrews, M.D., and George E. Shambaugh, M.D. Illustrated. 372 p., 12mo. Cloth, $1.50. Vol. 4. GYNECOLOGY. Edited by Emilius C. Dudley, A.M., M.D., and Sydney S. Schochet, M.D. Illustrated. 232 pp., 12mo. Cloth, $1.35. Vol. 5. PEDIATRICS. Edited by Isaac A. Abt, M.D., with the Collaboration of A. Levinson, M.D. ORTHOPEDIC SURGERY. Edited by John Ridlon, A.M., M.D., with the collaboration of Charles A. Parker, M.D. Illustrated. 240 pp. 12mo. Cloth, $1.35.

PHYSICAL EXERCISES FOR INVALIDS AND CONVELESCENTS. By Edward H. Ochsner, B.S., M.D., F.A.C.S. St. Louis, C. V. Mosby Co., 1917. 54 pp., 12mo. Cloth, $1.00.

ROENTGEN TECHNIC (DIAGNOSTIC). By Norman C. Prince, M.D. Illustrated. St. Louis, C. V. Mosby Co., 1917. 140 pp., 8vo. Cloth, $2.00.

COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minnesota. Edited by Mrs. M. H. Mellish. Vol. VIII, 1916. Illustrated. Phila. and Lond., W. B. Saunders Co., 1917. 1014 pp., 8vo. Cloth, $6.50.

HANDBOOK OF GYNECOLOGY. For students. By Henry Foster Lewis, A.B., M.D. and Alfred de Roulet, M.S., M.D. Illustrated. St. Louis, C. V. Mosby Co., 1917. 452 pp., 8vo. Cloth, $4.00.

MANUAL OF THE DISEASES OF THE EYE. For students and general practitioners. By Charles H. May, M.D. Ninth Edition, Revised, N. Y., William Wood & Co., 1917. 440 pp., 8vo. Cloth, $2.50.

DISEASES OF THE SKIN. By Richard L. Sutton, M.D. Illustrated. Second Edition, Revised and Enlarged. St. Louis, C. V. Mosby Co., 1917. 1020 pp., 8vo. Cloth, $6.50.

AMMUNITION FOR FINAL DRIVE ON BOOZE. An Up-to-date Arsenal for Prohibition Speakers. By Rev. Louis Albert Banks, D.D. N. Y. and Lond., Funk & Wagnalls Co., 1917. 402 pp., 8vo. Cloth, $1.50.

THE PRESCRIPTION, THERAPEUTICALLY, PHARMACEUTICALLY, GRAMMATICALLY, AND HISTORICALLY CONSIDERED. By Otto A. Wall, Ph.G., M.D. Illustrated. Fourth and Revised Edition. St. Louis, C. V. Mosby Co., 1917. 274 pp., 8vo. Cloth, $2.50.